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ABSTRACT

In the 1990s, the media represent the single most easily modifiable influence on children and adolescents. This series of articles offers medically oriented practitioners a review of current research on the influence of the media on children and adolescents. The 13 articles are: (1) "Children, Adolescents, and the Media: Five Crucial Issues" (Victor C. Strasburger); (2) "Media Violence: Q & A" (George Comstock and Victor C. Strasburger); (3) "Mass Media, Sex, and Sexuality" (Jane D. Brown and others); (4) "Effects of Media Alcohol Messages on Adolescent Audiences" (Charles K. Atkin); (5) "Television, Obesity, and Eating Disorders" (William H. Dietz); (6) "Sex Roles and Stereotyping on Television" (Nancy Signorielli); (7) "Pornography's Impact on Male Adolescents" (Neil M. Malamuth); (8) "Rock Music and Music Videos" (Robert L. Hendren and Victor C. Strasburger); (9) "Video Games" (Jeanne B. Funk); (10) "Adolescents, Parenting, and the Media in the Twenty-First Century" (David Elkind); (11) "Television and School Performance" (Michael Morgan); (12) "Alcohol and Cigarette Advertising: A Legal Primer" (Steven H. Shiffrin); and (13) "Killing Us Softly: Gender Roles in Advertising" (Jean Kilbourne). Each article includes references. (TJQ)

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STATE OF THE ART REVIEWS

Adolescent Medicine

Adolescents and the Media

Victor C. Strasburger, M.D.
George A. Comstock, Ph.D.
Editors

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Foreword

In the 1990s, the media represent the single most easily modifiable influence on children and adolescents—hence, our interest in devoting an entire issue to it. Busy practitioners may not understand how the research is done, what it signifies (or does not signify), or even what is currently on television and movie screens. This series of articles is designed to help medically oriented practitioners separate fact from controversy. Given the list of contributors—all at the forefront of their fields—this is truly a "state of the art" review. We would like to thank the authors for taking the time to share their expertise with our readers.

Victor C. Strasburger, M.D.
George A. Comstock, Ph.D.
GUEST EDITORS

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Children, Adolescents, and the Media: Five Crucial Issues

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This instrument can teach, it can illuminate; yes, and it can inspire. But it can do so only to the extent that humans are determined to use it to those ends. Otherwise it is merely wires and lights in a box.

Edward R. Murrow, 1958[49]

Those who tell stories hold the power in society. Today television tells most of the stories to most of the people, most of the time.

George Gerbner, 1992[16]

Television and other media represent the single most important *modifiable*—and neglected—influence on children and adolescents in the 1990s. Although pediatricians and child psychologists would agree that, overall, parents constitute the single most important influence in young people's lives, modifying parental attitudes or improving their standard of living is no easy task. For teenagers, peers can play a powerful role; but they, too, are often influenced by the media. Unhealthy attitudes learned from the media during childhood may be put into action during adolescence, with adverse consequences. Although there remains considerable controversy about the media and their effects on human behavior, much information is already known, either directly through research or intuitively. Physicians who treat children or adolescents need to acquaint themselves with recent advances in this crucial area.

ISSUE NO. 1: HOW MUCH INFLUENCE DO THE MEDIA HAVE?

This is an issue that many parents would rather not consider. After all, no parents in their right minds would invite a stranger into their household to teach their children for 3–5 hours a

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Philadelphia, Hanley & Belfus, Inc.

TABLE 1. Time Spent Watching Television in the United States*

Age Group	Time Spent Watching Television (hours:minutes/week)
2- to 5-year-olds	27:49
6- to 11-year-olds	23:29
Teenage boys	21:16
Teenage girls	22:18
18+-year-old men	29.18
18+-year-old women	33:40

* Data from 1990 Nielsen Report on Television.[1]

day, yet television does precisely that.[49] The real questions are (1) what, exactly, is it teaching children? and (2) are all children equally susceptible?

Television is by far the most significant medium by time criteria alone. American children and adolescents spend 22–28 hours per week viewing television—more time than in any other activity except sleeping (Table 1).[1] Although adolescents may spend an equal amount of time listening to the radio,[31,35] music is usually used as an accompaniment to homework, conversations, or even watching television.[54]

Given the sheer volume of time that American young people spend with this medium—15,000 hours by the time they graduate from high school versus 12,000 hours in formal classroom instruction—one might think that its influence would be a foregone conclusion. Yet, to date, television remains dismissed by many observers as "mere entertainment" or "fantasy." Unfortunately, children and adolescents do not view it as either. Perhaps many adults are quick to dismiss the influence of television because they do not want to admit that they, too, have been influenced by it. For children, television represents the real world and gives secret glimpses of teenage and adult behavior, as enacted by attractive role models.

The role-modeling aspect of television, although frequently overlooked, is crucial to understanding its influence.[2] Children, in particular, learn to behave by imitating attractive role models—their parents, most notably—but those present on the small screen in their living room as well. Contrary to popular belief, people rarely imitate what they see in the media immediately and directly. When they do—as when an Iowa teenager was killed after running in front of a train (imitating a scene from the popular movie, *Stand by Me*)—it invariably makes headlines. Rather, television exerts a far more subtle and insidious effect by shaping viewers' attitudes and perception of social norms.[2,6] One group of researchers refers to this as "stalagmite effects—cognitive deposits built up almost imperceptibly from the drip–drip–drip of television's electronic limewater."[6] For example, television may offer older children and younger adolescents scripts about gender roles, conflict resolution, and patterns of courtship and sexual gratification that they may be unable to observe anywhere else.[47] Heavy consumers of television may begin to believe that the world is a more violent place than it really is,[15] that violence is an acceptable solution to any problem,[15,54] or that all conflicts can be easily resolved within a short period of time. Similarly, if they watch a lot of soap operas, they may overestimate the number of sexually active teenagers and the incidence of extramarital affairs or underestimate the risk of sexually transmitted disease.[55]

Specific areas of influence include:

1. **Television violence and aggressive behavior.** Over 1,000 studies and reviews attest to the fact that exposure to heavy doses of television violence increases the likelihood of aggressive behavior, particularly in males (Fig. 1).[9,10,14,27] Two official U.S. government reports have confirmed this: the Surgeon General's Report in 1972

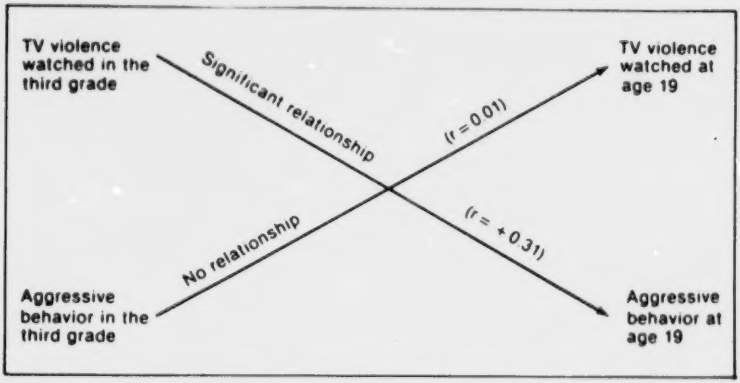
TV violence watched in the third grade
Significant relationship
(r = 0.01)
TV violence watched at age 19
No relationship
(r = +0.31)
Aggressive behavior in the third grade
Aggressive behavior at age 19

FIGURE 1. Does television violence watched in the third grade correlate with aggressive behavior at age 19? Yes. Results of a remarkable 10-year longitudinal study, which later was extended to 20 years with similar findings. The conclusion: aggressive behavior is learned at an early age and, once learned, is difficult to "un-learn." (From Lefkowitz MM, Eron LD, Walder LO, et al. Television violence and child aggression: A follow-up study. In Comstock GA, Rubinstein EA (eds): Television and Social Behavior, vol. 3: Television and Adolescent Aggressiveness. Washington, DC, U.S. Government Printing Office, 1972, pp 35–135. Reproduced from Liebert RM, Sprafkin J: The Early Window—Effects of Television on Children and Youth. New York, Pergamon Press, 1988, 3rd ed., p 97, with permission.)

and the National Institute of Mental Health report in 1982.[40,57] America's apparent love affair with guns is frequently played out on prime-time television; yet the United States leads the Western world in both handgun availability and handgun death (Table 2).[61] American children are more likely to be shot than children in any other country, and guns kept at home are far more likely to kill or injure a family member than an intruding criminal.[43,61] Homicide and suicide are now the second and third leading causes of death among teenagers, and guns contribute significantly to both. Several good studies now link television or newspaper publicity about suicide with an increase in teenage suicide.[17–19,45] Although the mechanism of this effect is unknown, role modeling probably plays a significant role.

TABLE 2. Handguns and American Children*

- Firearms rank as the second leading cause of fatal injuries in the U.S. (33,000 deaths annually).
- Each year, the U.S. has over 13,000 handgun homicides, compared with 52 or fewer in other developed countries.
- There are over 150,000 nonfatal firearm injuries per year.
- The proportion of gunowners in different regions of the U.S. parallels both the homicide and the suicide rate.
- Guns are 6 times more likely to kill or injure a member of the owner's household than an intruding criminal.
- Toy guns cause over 1,500 injuries per year.
- The sale of toy guns represents a nearly $100 million industry.
- Weapons appear an average of 9 times per hour in prime-time programs.

* Data from Christoffel KK, Christoffel T: Handguns as a pediatric problem. Pediatr Emerg Care 2:343–349, 1986, and Schetky D: Children and handguns: A public health concern. Am J Dis Child 139:229–231, 1985.

2. **Commercialization and consumerism.** American television is the most commercially exploitative of any broadcasting medium in the Western world. Toy manufacturers make an estimated $40 million a year pitching their products to children who are psychologically incapable of understanding the intent of commercials and believe that the claims are real.[10,33] Teenagers, on the other hand, are capable of understanding the sometimes deceptive nature of commercial advertising; they represent a potential market for manufacturers and producers worth $71 billion a year.[37] In 2250 B.C., the Code of Hammurabi made it a crime punishable by death to sell anything to a child. In the 1980s, the Reagan/Bush administration and the Federal Communications Commission (FCC) made such practices "business as usual." At the same time, the United States is the only Western nation that does not insist that its commercial networks produce at least one hour per day of educational programming for young people.

3. **School performance.** Early studies, which failed to control for IQ and socioeconomic status, showed variable effects of heavy viewing on school performance. However, more recent, better controlled studies have consistently documented a significant deleterious efffect of more than 1–2 hours/day of television viewing on academic performance, especially reading scores (Fig. 2).[52] Such effects probably derive from displacement of schoolwork and reading for pleasure (Fig. 3).

4. **Stereotyping.** Children's television is dominated by white male figures, who represent 75–90% of all characters.[3] In addition, cartoons are rich in stereotypes, with villains usually possessing non-Caucasian features and speaking in foreign accents.[39] For adolescents who are trying to figure out their place in the adult world, the world of television is overpopulated with doctors, lawyers, and policemen, giving the mistaken impression that only professionals have value in adult society.[54] By contrast, old people are underrepresented on American television and are frequently shown as "feeble grandparents bearing cookies."[15] A 1988 report also found that teenage girls are stereotypically portrayed as obsessed with shopping and boys and incapable of having serious conversations about academic interests or career goals; their looks are more important than their brains.[51]

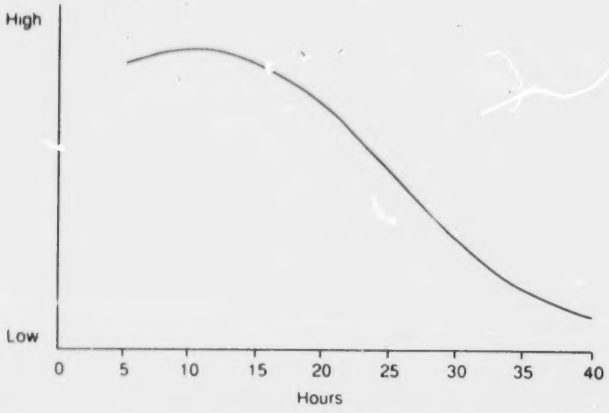

FIGURE 2. Estimated relationship of academic achievement and amount of television viewed weekly: Results of a meta-analysis. (From Williams PA, Haertel EH, Walberg J, et al: The impact of leisure-time television on school learning: A research synthesis. Am Educ Res J 19:19–50, 1982. Copyright © the American Educational Research Association. Reprinted with permission.)

OK, YOUNG MAN—THIS REPORT SAYS KIDS WATCH MORE THAN 3 HOURS OF TV A DAY BUT DO LESS THAN 5 PAGES OF READING!!
NO SWEAT, POP—I ALREADY READ 10 PAGES TODAY!
OH—WELL, GOOD FOR YOU!
...OF THE TV GUIDE....

FIGURE 3. Editorial cartoon. Copyright © John Trevor. The Albuquerque Journal. Reprinted with permission.

5. **Prosocial television.** Television can be a powerful prosocial teacher of children and adolescents. As *Sesame Street* and *Mister Rogers' Neighborhood* have demonstrated, toddlers can learn many valuable ideas about racial harmony, cooperation, and kindness, as well as simple arithmetic and the alphabet.[44] For older children and teenagers, shows like *DeGrassi Junior High, DeGrassi High, Beverly Hills 90210, Roseanne,* and various afternoon specials have dealt sensitively with such issues as divorce, teenage pregnancy, drug use, alcoholism, AIDS, and suicide (Fig. 4).

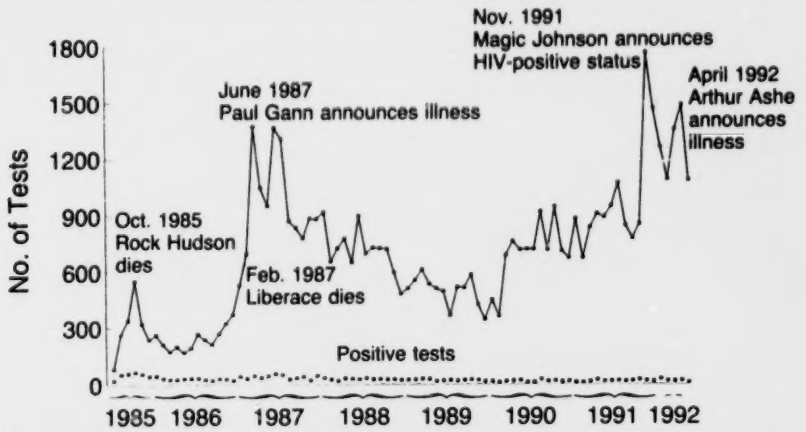

FIGURE 4. Impact of celebrities' disclosures that they are HIV-positive or have AIDS on the number of anonymous HIV-antibody tests requested in Orange County. (From Gellert GA, Weismuller PC, Higgins KV, et al: Disclosure of AIDS in celebrities. N Engl J Med 327:1389, 1992. Reprinted with permission.)

6. **Obesity.** Recent evidence implicates heavy television viewing as one cause of obesity in children and adolescents.[10] This may be because watching television is such a passive activity; because many unhealthy products are advertised, such as sugar-coated cereals; or because many people tend to snack while viewing television. In addition, the unhealthy depiction of certain body types (e.g., fat people are underrepresented and often subjected to ridicule) and the frequent depiction of food as a bribe may also contribute to the prevalence of eating disorders.[10,29]

7. **Sex and sexuality.** In the absence of effective sex education at home and school, television has become the leading sex educator in America today. Sex is used to sell everything from shampoo to cars, yet birth control advertising remains taboo on national network television—despite the fact that Americans would like to see more responsible sexuality in programming and approve of airing ads for contraceptives (Tables 3 and 4).[24] American television is extremely sexually suggestive: the average American teenager views over 14,000 sexual references annually, of which less than 175 deal responsibly with human sexuality.[25] Of course, the worst offenders are soap operas. Since 1980, the sexual content of soap operas has increased over 100%.[20] Sex between unmarried partners is 24 times more common than between spouses, and the mention of birth control or sexually transmitted disease (STD) is still extremely rare.[21,34] Not surprisingly, American society pays a high price for its refusal to allow teenagers ready access to birth control: the highest teenage pregnancy rate in the Western world, despite the fact that American teenagers are not having sexual intercourse at higher rates than other teenagers.[28]

8. **Cigarettes and alcohol.** Ironically, American networks refuse to allow advertising for contraceptives, which would prevent untold numbers of pregnancies and STDs, yet gladly accept advertising for a product involved in 25–50% of all adolescent deaths—alcohol. American youth view between 1,000 and 2,000 beer and wine commercials per year, and many of the implicit messages are meant to appeal specifically to them: beer is fun, people who drink beer have more fun and are sexier, and "real" men drink beer.[41,53] Beer and wine manufacturers spend $900 million a year for advertising, and per capita consumption has increased 50% in the United States since 1960.[53] Given these facts, manufacturers' claims that they are merely trying to "influence brand selection" ring false. Clearly, advertising increases consumption.[56] Sweden, which banned alcohol ads in the mid-1970s, experienced a 20% decrease in per capita consumption.[42] Although manufacturers are now devising "know when to say when" campaigns, this has been primarily in response to the threat of a complete television ban on all beer and wine ads. In addition, for every such public service announcement teenagers see, they see 25–50 regular advertisements.[53] Sadly, although the Partnership for a Drug Free America has concocted clever anti-drug ads ("This is your brain. This is your brain on drugs. Any questions?"), it has never dealt with either alcohol or tobacco.

TABLE 3. Television and Birth Control*
(n = 1,250 adults)

	Yes (%)	No (%)
Are you in favor of advertising birth control on TV?	60	37
Would birth control advertising		
encourage teenagers to have sex?	42	52
encourage teenagers to use contraceptives?	82	14

* Adapted from Harris L and Associates, Inc.: Attitudes about Television, Sex, and Contraceptive Advertising. New York, Planned Parenthood Federation of America, 1987.

TABLE 4. What Should Be Advertised on Television?*
(n = 1,250 Adults)

	Yes (%)	No (%)
Political candidates	77	20
Hemorrhoid treatments	71	27
Tampons	63	33
Contraceptives	60	37
Feminine hygiene sprays	58	39
Beer and wine	53	45

* Adapted from Harris L and Associates, Inc.: Attitudes about Television, Sex, and Contraceptive Advertising. New York, Planned Parenthood Federation of America, 1987.

Despite the fact that tobacco products were banned on television by the Public Health Cigarette Smoking Act of 1969 (a later 1986 act banned ads for chewing tobacco), much inadvertent or passive advertising exists on television.[4,56] In addition, tobacco manufacturers spend $3.2 billion a year on advertising in print media and promotional campaigns for their products,[8] which kill over 400,000 Americans each year.[38]

ISSUE NO. 2: ARE ALL CHILDREN EQUALLY SUSCEPTIBLE?

This is a deceptively difficult question, but the answer appears to be no. Early studies of effects of televised violence indicated that boys were far more susceptible than girls.[33] But those studies have not been replicated recently, and there is increasing concern that girls are now equally vulnerable. Most studies of major television influences, from sex-role stereotyping to impact of advertisements on drinking or smoking behavior, have found that heavier consumers of television are more at risk than infrequent viewers. And recently, several intriguing, small-scale laboratory and field studies about adolescent sexuality and the media have shown that:

- Teenagers may not be a homogeneous group of viewers. White and black teenagers interpret Madonna's "Papa Don't Preach" video very differently, for example. White teenagers were nearly twice as likely to think the video was about teenage pregnancy, whereas black teenagers considered it to be a story about father-daughter relationships.[5]
- "Massive exposure" to prime-time programming that deals with pre-, extra-, or nonmarital sex may desensitize young viewers to such "improprieties." However, several factors can mitigate against this effect, including a clearly defined value system within the family, an ability to discuss freely important issues within the family, and active, critical viewing skills.[6]
- In a small study of adolescents' interpretations of soap operas, one researcher found that teenagers' own sexual "schemas" influenced their perceptions of the characters' relationships.[59]

Such studies seem to indicate that parents play a preeminent role in their children's social learning, but only if the parents' views are discussed explicitly. Otherwise, the media may "fill in the blanks." In addition, these studies and most communication experts suggest that **media literacy** exerts a protective effect against harmful influences. Several different types of curricula have been developed for school use. At Yale, the Singers developed an eight-lesson critical viewing curriculum for third through fifth graders, designed to teach them how television programs are produced, how special effects are accomplished, how television differs from reality, how stereotypes

are portrayed on television, and the unreality of television violence.[48] Dorr at UCLA has developed a similar curriculum.[11] Both have been extensively and successfully field-tested. In 1983, Huesmann and Eron—two leading researchers—developed a curriculum to counter some of the adverse effects of televised violence and implemented successful pilot tests. First and third graders who completed the program experienced changes in attitudes about television violence and in their own level of aggressive behavior as rated by peers.[26] More recently, the Center for Media and Values in Los Angeles has developed a four-session curriculum for parents, entitled *Parenting in a TV Age*, and an eight-lesson program for children, entitled *TV Alert: A Wakeup Guide to Television Literacy*.[7] Moreover, Home Box Office and Consumer Reports have pioneered a series of shows, including *Buy Me That!* and *Buy Me That Too*, which teach children about television commercials and consumerism. Finally, the Singers have also developed an effective adolescent health education minicurriculum using five episodes of *DeGrassi Junior High* with teenagers and preteens in grades 5–8.[50]

Currently, this is an area of intensive research among communication specialists and may yield exciting new approaches in the 1990s for mediating the harmful effects of the media on children and adolescents.

ISSUE NO. 3: HOW VALID IS THE RESEARCH?

Media research is not easy to understand, nor is it readily accessible to the average busy practitioner or academician. In addition, communication research differs significantly from medical research, especially when considering the concept of significance. An r value (correlations coefficient) of 0.3 is moderately significant in social science research, whereas it would be dismissed as insignificant in most medical research, where values of 0.8 and above are needed.

The field of media research is a fascinating one because it represents the attempt to delineate effects of a medium that is ubiquitous—television. How does one study such a phenomenon when a control group does not exist anywhere in the Western world? (More American households have television, for example, than indoor plumbing!) Researchers have employed a variety of creative techniques. The earliest **laboratory experiments** documented that children would often imitate what they saw on the television screen, but these studies were deemed artificial.[33] **Naturalistic studies**, which compared children with television to children without access to television, were possible until the late 1970s. The last study, which examined a Canadian town before and after the introduction of television (with two nearby towns, both with television, serving as controls), found that children were more aggressive and less creative in their play, had lower reading skills, and exercised less during the first two years after television was introduced.[60]

Much recent work has taken the form of **content analysis**—simply counting up the number of behaviors depicted in television programming over a unit of time. Such analyses show, for example, that American television is extremely violent,[27] sexually suggestive,[22,25] and rife with alcohol advertisements,[56] alcohol use,[58] and sexually violent videos.[46] But these studies document only what is shown, not its effect on the viewer. To obtain cause-and-effect data, a **longitudinal correlational study** is needed: study of a large population over a period of time to determine if frequent viewers of television are more likely to be affected than infrequent viewers. This is the "smoking gun" type of study that the networks demand before being willing to make changes, but only a few such studies exist in the area of violence and its effect on aggressive behavior. In a unique, 29-year study, Eron and Huesmann

found that the amount of violent programming viewed in the third grade was directly related to aggressive behavior at age 19 and age 30 years. This relationship holds true across national and cultural borders as well.[26]

Of course, practitioners should realize that *objections to various programming and advertising practices can exist on common sense, philosophical, aesthetic, humanistic, or public health grounds as well as on scientific grounds.*[13] Researchers will never be able to deluge 8-year-old girls with sexy soap operas and ascertain what attitudinal changes have taken place.

Much research is still needed, but adequate funding continues to be a major obstacle. Although this is a crucial area of inquiry, not a single foundation or government agency has taken on television research as a major funding goal. Possibilities for future research include:

- Funding of Udry's national study of adolescent sexual behavior, rejected by the Bush administration because it was considered too "controversial."[36] This study would have included several questions on adolescents' use of the media.
- A large-scale longitudinal correlational study that would help to elucidate television's effects on consumerism, sex-role stereotyping, racial attitudes, sexual attitudes and behavior, sexual violence, drug use, and attitudes about eating and body habitus.
- Updating of the 1982 National Institute of Mental Health report with a 1996 follow-up report that coordinates all existing data on television's effects on young people and sets priorities for new research.

ISSUE NO. 4: WHAT CAN BE DONE TO IMPROVE THE QUALITY OF TELEVISION?

The quality of television programming for children and adolescents in the United States is a national disgrace.[15] American television is the most violent, the most sexually suggestive and irresponsible, and the most commercially exploitative in the world. Other countries—most notably Great Britain and Japan—have given far higher priority to daily educational programming for children and adolescents by adequately funding their public television stations. By contrast, in the United States there is not a single hour of daily educational programming for children on any of the four commercial networks (the last such show was *Captain Kangaroo*!). The Corporation for Public Broadcasting,which controls the Public Broadcasting System, is woefully underfunded and, of course, has to program for adults as well as children. The industry claims that (1) it is simply giving the American public what it wants and (2) parents have the responsibility to guide their children's viewing. Although the latter is certainly true, it is also the industry's responsibility to produce high-quality, entertaining, socially conscious programming for young people. Gratuitous sex and violence are unnecessary to ensure Nielsen or box-office success—witness the popularity of *The Cosby Show* or G-rated movies like *The Little Mermaid, Beauty and the Beast*, or *Aladdin*.

A number of suggestions have been made that would significantly improve American television:

- An annual tax on each television set in the United States to help to endow public television. This is how Great Britain can afford BBC-1 and BBC-2. The tax is approximately $75/set/year.
- Creation of a separate, commercial-free, educational channel for children—a Children's Television Network. (Current estimates are that within the next decade, television programming will be carried into households via fiberoptic phone lines.

TABLE 5. Responsible Portrayals of Sexuality in the Media*

- Recognize sex as a healthy and natural part of life.
- Encourage parent-child discussions about sex.
- Discuss or show the consequences of unprotected sex.
- Show that not all relationships result in sex.
- Indicate that the use of contraceptives is essential.
- Avoid linking violence with sex.
- Depict rape as a crime of violence, not of passion.
- Recognize and respect the ability to say no.

* Adapted from Center for Population Options, SIECUS Report, 1987, pp 9–11.

Potentially, this could mean hundreds of available channels. If this is true, at least 10 or 20 such channels should be reserved for commercial-free, age-specific, educational channels for children and adolescents.)

• Resurrection of an activist Federal Communications Commission (FCC). In 1934, Congress empowered the FCC to regulate the television industry. Under the Reagan and Bush administrations, the FCC has rolled over and played dead. An activist FCC would ensure that Americans get the high-quality television they deserve (and that many Hollywood writers and producers are capable of creating—Steven Bochco, for example).

• Adoption of a uniform television industry code that insists on responsible portrayals of sexuality (Table 5), advertising of birth control products, avoidance of gratuitous violence, and a willingness to deal with controversial subjects, particularly health-related ones. Vigorous counterprogramming campaigns may also be useful (Fig. 5).

• Voluntary avoidance by the Hollywood community of such unnecessary ploys as racist, sexist, or violent song lyrics, camera shots that linger on bullet holes or spurting blood, and graphic depictions of women being beaten or raped.

• A ban on beer and wine commercials in broadcast media and a ban on tobacco advertising in *all* media (Fig. 6). In addition, other advertising that targets younger children (e.g., toy or food ads) should be more strictly regulated by the FCC and the Federal Trade Commission.

Many of these items are contained in current bills pending in the U.S. Congress, and all have been endorsed by the American Academy of Pediatrics.

ISSUE NO. 5: WHAT IS THE ROLE OF THE PRIMARY-CARE PHYSICIAN?

Parents and health professionals need to familiarize themselves with what is on television, to watch television with their children, to exercise control over how many hours per day are watched, and to understand that they have the power to effect changes in the media through federal regulations and legislation.

Practitioners who treat babies can have the most powerful effect, because the recommendations listed below need to be implemented early, before 1 year of age if possible. Practitioners who treat older children and teenagers need to take a detailed television history if they see patients with any of the following problems:

- obesity
- learning disorders
- aggressive behavior
- suicidal ideation
- depression

In addition, adolescent medicine physicians should be aware of the fact that a strong preference for heavy metal music has been shown to correlate with many acting-out or depressive behaviors in adolescence.[30,31]

FIGURE 5. Two examples from an aggressive counter-advertising campaign: A billboard and a public service advertisement from a Baltimore health coalition. Copyright © Campaign for Our Children. Reprinted with permission.

Specific counseling recommendations for families with children and teenagers include:

1. **Parents should be counseled to limit their children's television viewing to no more than 1 hour per day.** Obviously, alternative activities must be provided and should be strongly encouraged.

2. **Parents need to monitor what shows their children and teenagers are watching.** Ideally, television should not be used as an electronic babysitter. Nevertheless, if parents want free time of their own, at least they can use a videocassette recorder with prerecorded or rented tapes of their own choosing rather then let their young children play "channel roulette."

3. **Parents of teenagers need to realize that they can counteract the overly sexual or violent nature of much television programming, including MTV, but only if they watch such shows with their teenagers and explain their own views** (Table 6). Clear explanations of parents' values and expectations—even if they are conservative ones—are useful and protective of teenagers against adverse media effects.

Practitioners who are interested in public health or political action can have a major impact in their own communities by supporting such legislation and also by serving as a resource for local school programs. Specific curricula can teach young people how unreal media violence is, how television is actually made, or how commercials are meant to sell products without necessarily telling the whole truth;

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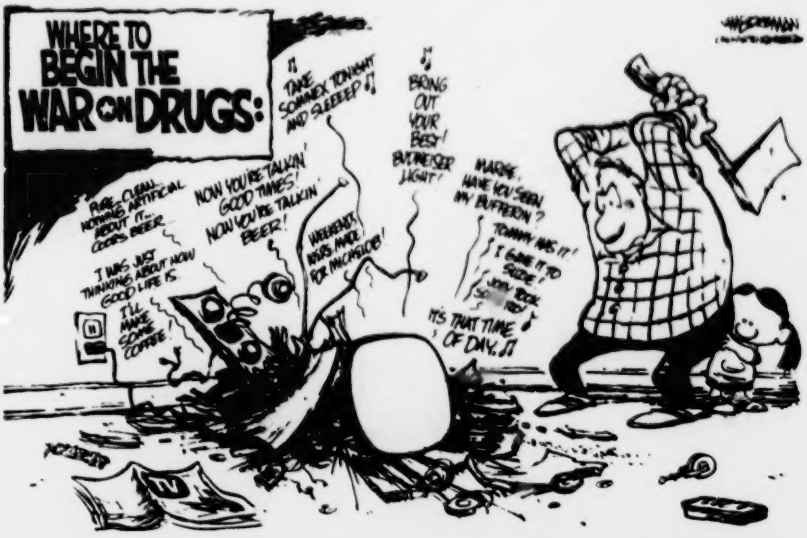
WHERE TO BEGIN THE WAR ON DRUGS:
TAKE SOMNEX TONIGHT AND SLEEEEP
BRING OUT YOUR BEST! BUDWEISER LIGHT!
MARGE, HAVE YOU SEEN MY BUFFOON?
TOMMY HAS IT!
I GAVE IT TO SADDIE!
IT'S THAT TIME OF DAY.
PURE, CLEAN, NOTHING ARTIFICIAL ABOUT IT... COORS BEER
NOW YOU'RE TALKIN' GOOD TIMES! NOW YOU'RE TALKIN' BEER!
WHEREVER THERE MADE FOR MACHISMO!
I WAS JUST THINKING ABOUT HOW GOOD LIFE IS.
I'LL MAKE SOME COFFEE!

FIGURE 6. One editorial cartoonist's view of where to begin the War on Drugs. Copyright © King Features Syndicate. Reprinted with permission.

but such programs need to be "sold" to school administrators. Finally, according to the Children's Televison Act of 1990, passed by Congress, each local television station has an obligation to produce programming that is educational for children. Unfortunately, broadcasters are currently flaunting the will of Congress (e.g., *F-Troop* teaches teamwork; *The Jetsons* teaches children about the future).[12] But local coalitions of parents and health professionals, challenging television stations as they come before the FCC for relicensure, may be able to change this sorry situation.

TABLE 6. Five Important Ideas to Teach Kids about Television*

1. You are smarter than what you see on your TV.
2. TV's world is not real.
3. TV teaches that some people are more important than others.
4. TV keeps doing the same things over and over again.
5. Somebody is always trying to make money with TV.

* Adapted from Davis J: Five important ideas to teach your children about TV. Media & Values 59/60:10–14, 1992.

APPENDIX: IMPORTANT ADDRESSES

Networks

ABC: Entertainment President, 2040 Avenue of the Stars, Fifth Floor, Los Angeles, CA 90067

CBS: Entertainment President, 7800 Beverly Blvd., Los Angeles, CA 90036

NBC: Entertainment President, 3000 West Alameda, Burbank, CA 91523

FOX: President, Fox Broadcasting, P.O. Box 900, Los Angeles, CA 90213

Federal Communications Commission

FCC/Mass Media Bureau, Enforcement Division, Room 8210, 2025 M St., Washington, D.C. 20554

Activist Groups

American Academy of Pediatrics, Committee on Communications, 141 Northwest Point Blvd., P.O. Box 927, Elk Grove Village, IL 60009-0927

Action for Children's Television, 20 University Rd., Cambridge, MA 02138

Center for Media and Values, 1962 South Shenandoah, Los Angeles, CA 90034

National Coalition on Television Violence, P.O. Box 2157, Champaign, IL 61825

Parents' Choice Foundation, Box 185, Newton, MA 02168

Parents' Music Resource Center, 1500 Arlington Blvd., Arlington, VA 22209

Coalition for Quality Children's Videos, 535 Cordova Rd., Suite 456, Santa Fe, NM 87501

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Media Violence: Q & A

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Violence in the media is a major threat to the health of American children and adolescents. Although media violence is probably not the leading cause of real-life violence, it is certainly a significant factor—and one that is far more easily modifiable than, for example, socioeconomic conditions or the quality of parenting. The fact that violence represents the single leading cause of death among youngsters in the United States (Table 1) gives increasing urgency to the need for diminishing any such potentiating influences. When nearly 20% of all students in grades 9–12 report having carried a weapon to school, according to one national survey,[15] the glorification of weaponry that occurs on television and movie screens cannot be easily ignored. Children aged 2–8 are particularly susceptible, and the unhealthy notions that they learn from media portrayals of violence may be played out during adolescence or even adulthood.[23,46,63] The following questions and answers summarize the extensive scientific and public health inquiry into media violence, particularly violence on television.

Q. How violent is American television?

A. American television and movies are the most violent in the world. Conservative estimates indicate that the average American child or teenager views 1,000 murders, rapes, and aggravated assaults per year on television alone.[62] A recent review by the American Psychological Association puts this figure at 10,000 per year.[44] If anything, children's programming is even more violent than prime-time programming (Table 2), and the amount of violence has not changed appreciably over the past two decades, despite increasing public awareness and concern (Fig. 1). Between 1982 and 1988, the amount of television time devoted to war cartoons

TABLE 1. Leading Causes of Death, Young People, Ages 15–24, 1988 (deaths per 100,000)

All causes	102.1
Motor vehicle accidents	38.5
Homicide	15.4
Suicide	13.2
Other accidents	11.0
Malignancies	5.1
Diseases of the heart	2.9
AIDS	1.4

From the National Center for Health Statistics, Monthly Vital Statistics Report, vol. 39, no. 7S, November 28, 1990.

increased from 90 minutes to 27 hours a week.[14] The recent "reality-based" shows are extremely violent (Table 3). In addition, over half of music videos on Music Television (MTV)—a medium unique in its appeal to teenagers and preteens—contain violence.[56]

Graphic violence is far more common in movies than on television, but the average American child watches only 1 or 2 movies per week, compared with 23–28 hours of television.[1] The amount of movie violence escalates with the number of the sequel: fatalities in *RoboCop 2* increased from 32 in the original to 81; *Die Hard 2* had a body count of 264, compared with 18 in the original.[55] Critic Roger Ebert estimates that Arnold Schwarzenegger has already killed 250 people on screen during his brief movie career.[28]

Q. What proof exists that media violence causes real-life violence?

A. Over 1,000 separate studies and reviews now attest to the fact that media violence may (1) facilitate aggressive and antisocial behavior; (2) desensitize viewers to future violence; and (3) increase viewers' perceptions that they are living in a mean and dangerous world.[20,31] Both the 1972 Surgeon General's Report and the 1982 National Institute of Mental Health Report concluded that exposure to media violence can increase aggressive behavior in young people.[46,54,64] As one leading researcher recently reported, "The scientific debate is over."[29]

Q. How is the research conducted?

A. These conclusions are based on three distinctly different types of studies—laboratory experiments, field surveys, and meta-analyses. The first are typified by the pioneering studies of Bandura at Stanford and Berkowitz at Wisconsin in the 1960s.[5,6,9] Bandura observed the behavior of nursery school children in a playroom filled with toys, among them a Bobo doll (a punching bag with a sand base and a nose that squeaked).[5] First, the children were mildly frustrated (to increase the likelihood

TABLE 2. Violent Dramatic Programming on Network and Cable Television

	Cable Programming		Network Programming	
	Children's	*General*	*Children's*	*Prime-time*
% Programs with violence	77	70	83	74
No. violent acts/hour	17	9	32	4

Adapted from Gerbner G: Violence in cable-originated television programs: A report to the National Cable Television Association. Philadelphia, Annenberg School of Communications, 1992.

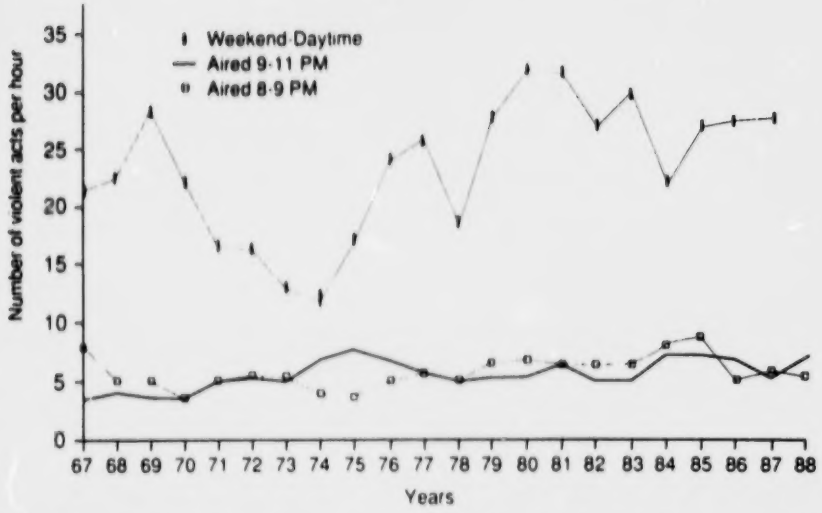

FIGURE 1. Number of violent acts per hour for children's and prime-time programming, from 1967 to 1988. From an unpublished manuscript by Gerbner and Signorielli, 1990, University of Pennsylvania, Annenberg School of Communications, Philadelphia. Reprinted with permission.

of aggressive behavior) by being led away from a room full of attractive toys. Then each child saw either (1) an ordinarily dressed person attack a Bobo doll, physically and verbally; (2) a televised sequence of the same attack; or (3) a televised sequence of the same attack performed by a "Catwoman," such as may appear in a Saturday morning cartoon. A control group saw no behavior involving the Bobo doll. The children in the three experimental groups directly imitated the attacks they had seen, often using the same language. In addition, nonimitative aggression during play also increased. Those who saw the Catwoman displayed less aggression than those who saw the live model, but clearly more aggression than the control group.

In Berkowitz's study, a group of college students were shown a brutal boxing sequence on film. One group was told that the beating was justified; the other was

TABLE 3. The Most Violent Shows on Network Television

Show	Acts of Violence/Hr
Young Indiana Jones Chronicles (ABC)	60
Covington Cross (ABC)	45
The Hat Squad (CBS)	42
Raven (CBS)	42
Angel Street (CBS)	41
Top Cops (CBS)	38
The Edge (FOX)	33
FBI: The Untold Stories (ABC)	28
Final Appeal (NBC)	27
Secret Service (NBC)	24
America's Most Wanted (FOX)	20

Data from the National Coalition on Television Violence, press release, February 10, 1993.

told that it was without justification. Those who viewed the "justified" version later displayed greater hostility.[9]

Q. So one would conclude that . . . ?

A. Observation affects behavior, even when it is observation of a cartoonlike character. Justified or rewarded aggression is more likely to be emulated.

Q. What are the connections between adolescents and the research on children?

A. First, aggression is a fairly stable trait.[40] If the behavior emulated is successful or reinforced, it will likely become repeated and typical of the child and, later, the adolescent. Second, children are a useful population in which to study psychological mechanisms. What differs among older youth is not the mechanism or outcome but the specifics—what is perceived to be rewarding and to what degree.

Q. Can experiments done in laboratory settings be extrapolated to everyday life?

A. Yes and no. If the experiment validly reproduces a factor as it would occur in everyday life—yes.[13] The question that an experiment cannot answer is to what extent laboratory behavior can predict real-life behavior. At this juncture surveys become useful.

Q. Describe a typical survey.

A. Surveys involve assessment of four key elements:[20]

1. Amount of violent programming viewed
2. Amount of aggressive or antisocial behavior
3. Other variables that could figure in any relationship between 1 and 2
4. Large samples of young people, ranging up to several thousand

The amount of violence viewed is usually determined by how frequently a program is seen, combined with how violent a panel of experts rates it. Measures of behavior may include reports from the subjects themselves, peers, parents, and teachers. Peer ratings tend to be particularly reliable and valid.[18]

Q. What are the principal findings from surveys?

A. Young people who watch a greater amount of violent programming behave more aggressively. These findings are remarkably consistent throughout nearly 50 studies.[52]

Q. Could other factors explain this finding?

A. The data permit testing of two alternatives to the hypothesis that viewing is responsible. First, some evidence suggests that more aggressive youths seek out more violent entertainment, but the studies are clear that this tendency does not completely explain the association. The connection between media and real-life violence also is clearly not attributable to some third variable. For example, young people doing poorly in school may watch more television and see more violence, but they may become more aggressive because school failure is frustrating. Belson's study in 1978 of 1500 London boys, aged 12–17, is an excellent example.[7] He found that antisocial behavior over the previous 6 months was associated with greater viewing of violence. Boys who viewed larger amounts of violent television committed a much greater number of seriously harmful antisocial and criminal acts than matched peers who were light viewers. No other variable could be implicated, nor could the entertainment habits of aggressive youths explain the finding.[7]

Q. Do longitudinal surveys also help to clarify this issue?

A. Yes. This has been called the "chicken-and-the-egg" dilemma: does media violence actually cause aggressive behavior, or do aggressive people simply prefer to watch it more often? Huesmann and Eron's remarkable series of studies, reported in 1972, 1984, and 1986, effectively answered this question.[38-42] Data from a 1963 study of 875 third graders in upstate New York were used, and 460 of the original sample were restudied at age 19 years.[38] The relationship between viewing television violence in the third grade and aggressive behavior 10 years later was highly significant (an r value of 0.31 in social science research would be roughly equivalent to an r value of 0.8 in medical research). Aggressive behavior in the third grade was not predictive of consumption of violent television at age 19 (Fig. 2). Restudying the same population in 1983, at age 30, the reseachers again found a link between exposure to television violence at age 8 and antisocial behavior—this time 22 years later (Fig. 3).[40] They concluded:

> Aggressive habits seem to be learned early in life, and once established, are resistant to change and predictive of serious adult antisocial behavior. If a child's observation of media violence promotes the learning of aggressive habits, it can have harmful lifelong consequences (p. 129).[41]

A year later, the same researchers studied more than a thousand children in the United States, Australia, Finland, Israel, the Netherlands, and Poland over a 3-year period. For boys in all countries and for girls in the United States, the findings were the same.[42]

Q. What are meta-analyses?

A. Meta-analyses are assessments of a body of scientific literature in which the findings of the individual studies become the data, with each study assigned a role

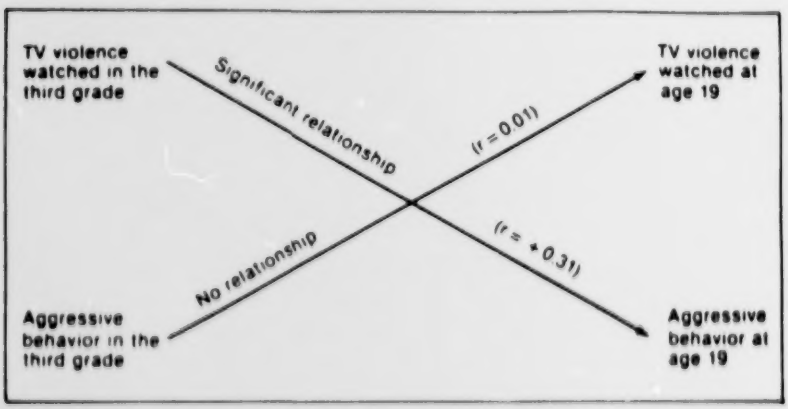
TV violence watched in the third grade
Significant relationship
(r = 0.01)
TV violence watched at age 19
No relationship
(r = +0.31)
Aggressive behavior in the third grade
Aggressive behavior at age 19

FIGURE 2. Does heavy viewing of TV violence in the third grade produce more aggressive behavior at age 19? Yes, according to a unique longitudinal correlational study by Huesmann and Eron. From Lefkowitz MM, Eron LD, Walder LO, Huesmann LR: Television violence and child aggression: A follow-up study. In Comstock GA, Rubinstein EA (eds): Television and Social Behavior, vol. III: Television and Adolescent Aggressiveness. Washington, DC, U.S. Government Printing Office, 1972, p 49. Reproduced from Liebert RM, Sprafkin J: The Early Window: Effects of Television on Children and Youth, 3rd ed. New York, Pergamon Press, 1988. Reprinted with permission by Allyn and Bacon.

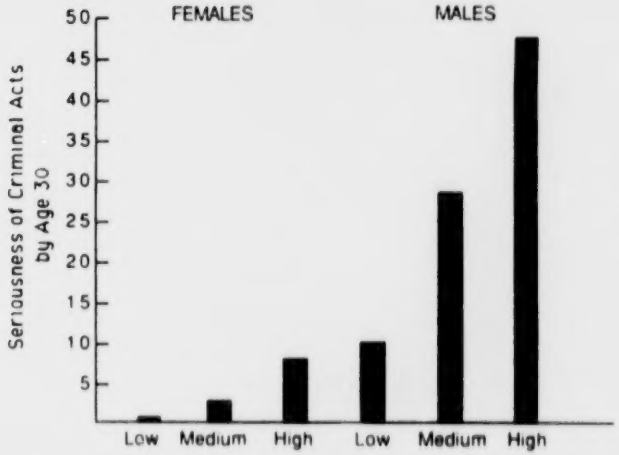

FIGURE 3. The Huesmann and Eron study, extended 11 years further, to examine the relationship between viewing large amounts of TV violence at age 8 and seriousness of criminal acts at age 30. From Huesmann.[41] Copyright ©1986 by the Society for the Psychological Study of Social Issues. Reprinted with permission.

analogous to that of a respondent in a survey.[51] Three such studies—one covering 67 experiments involving about 30,000 subjects[2]; one covering 230 studies involving almost 100,000 subjects (Fig. 4)[36]; and one covering 188 studies[52]—support the finding that exposure to television violence increases the likelihood of subsequent aggressive or antisocial behavior.

Q. If the literature is so compelling, why is there a controversy?

A. A number of explanations are possible: (1) Television and the movies represent a multibillion dollar industry in the United States. Just as the tobacco industry refuses to acknowledge that smoking cigarettes causes lung cancer, Hollywood and New York media executives are unwilling to admit that media violence may have real-life repercussions.[16,17] (2) Adults control the media. Most adults understand that television and movies are fantasy and entertainment. Unfortunately, most adults also think that children—including very young children—can make this distinction as well. Young children cannot. They view television as "real"; hence, the adverse behavioral consequences.[23,46,63] (3) Health professionals frequently misunderstand the social science literature or demand from it a level of statistical significance that is simply impossible to achieve when dealing with investigations of human behavior.[61]

But the fact remains that the literature gives little comfort to those who assert that the findings are conflicting, that the studies are inferior, or that violence on television does not influence behavior.[19-21,23,29,36]

Q. Do particular factors affect aggressive or antisocial behavior?

A. Violence depicted as justified retribution is one of the most strongly reinforcing elements;[9] of course, much of American television and movie violence contains this theme. So, too, is media violence that is either rewarded or unpunished.[4] A viewer's perception of violence may be influenced by four key factors:[20]

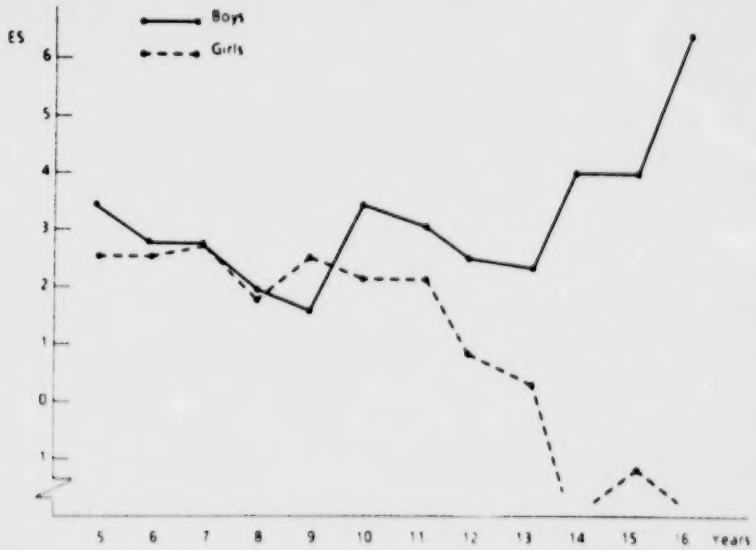

FIGURE 4. A meta-analysis of 230 separate studies to examine the effect size of television's influence on aggressive behavior at different ages. From Hearold.[36] Reprinted from Comstock G (ed): Public Communication and Behavior, vol. 1. New York, Academic Press, 1986. Reprinted with permission.

1. **Efficacy:** Does the violence result in the achievement of desired social, material, or psychological rewards?
2. **Normativeness:** Is the violence portrayed as widespread or socially acceptable?
3. **Pertinence:** Does the instigator of the violence resemble the viewers, or are their circumstances similar?
4. **Susceptibility:** Viewers who are angry, frustrated, or have a reason to seek retribution are more likely to be influenced.

Q. Why are these factors operative? In other words, why does the connection between media violence and real-life violence exist?

A. The three theories most applicable to children and adolescents are Bandura's social learning theory,[4] Berkowitz's cognitive neoassociation theory,[8, 12] and Zillmann's excitation or arousal theory.[70] The first holds that young people learn how to behave by modeling behavior that they witness, including vicariously through the media. In addition, they learn the circumstances appropriate for certain behavior and the likely consequences. The second theory holds that vicarious media experience may either encourage or inhibit behavior by evoking certain associations, images, or thoughts. The third theory is more applicable to younger children[70] and holds that excitement produced by media exposure may transfer to other ongoing activities, thus heightening the intensity of aggression that is under way.

Q. Do the data represent a developmental process?

A. The research deals only with aggressive or antisocial behavior. Children who watch large amounts of television violence in the third grade were more likely to be

aggressive in their behavior 10 and 22 years later,[38,45] particularly those who consistently viewed violent programming.[48] In another study, when data were collected over a 3-year period, the relationship between viewing violence and aggressive behavior increased over time.[22,48] These data point to a developmental process.

The effect may occur at any age but probably before adolescence.[20,30] It may begin as early as 14–24 months: one researcher found that children in this age range could imitate a television portrayal, even 24 hours later.[47] But much of the worrisome effect of media violence is not the direct and immediate imitation that makes the front-page headlines but rather the insidious and cumulative influence on social values and perceptions. These, in turn, guide behavior when an event, person, or cue makes them relevant.

Q. Does media violence make the world seem more frightening to young people?

A. Yes. This is known as a cultivation effect of the media.[49,50] The hypothesis is that the media change the way that people view their own world. Beliefs are most strongly affected.[20,35,36,43,65,66] The world is seen as more dangerous and threatening (e.g., higher crime rates, fewer honest people, greater personal risk) by those exposed to greater amounts of such content. Gerbner refers to this as the "mean and scary world" syndrome.[31]

Q. What about desensitization?

A. Desensitization definitely exists. Young people may become more indifferent to the plight of others as the result of exposure to media violence. For example, young children exposed to a violent television sequence were less ready to intervene when other children fought or vandalized property.[26] After exposure to a series of slasher films, depicting gory violence against women, male college students were less sympathetic toward an alleged rape victim and more inclined to hold her responsible.[24,67] Desensitization to media violence by repeated exposure is particularly apparent[24] and may be responsible for greater public callousness toward the issue and for greater public acceptance of even more violence in television programming and movies.

Q. Almost every area of scientific inquiry has certain myths or common misunderstandings. Are there any in the study of media violence?

A. Boys were once thought to be far more susceptible to media violence than girls. This was largely the result of Bandura's early experiments.[4–6] Numerous later studies, however, document that effects are quite similar for girls.[20,22,52]

Q. Do all media have these effects?

A. Television is by far the predominant medium by virtue of children's early and continuous exposure. Compared with other media, television and film can graphically and vividly portray complex events so that they are not only more likely to be recalled but also more available for emulation. Movies are far more graphic than television. As one researcher notes, "What television suggests, the films do."[33] But children watch perhaps only 1–2 movies per week, compared with 23–28 hours of television. Violence in print media is more analogous to the instructions that accompany electronics gear: the reader has to go over them. Seen on the television or movie screen, a hammer blow, the swipe of a tire iron, and blood spurting from a bullet hole

are plain enough. In summary, the media (1) vary in the degree to which they are attended regularly; (2) have a powerful impact on impressions; (3) consistently present a picture of the world that leads to expectations and perceptions that favor aggressive and antisocial behavior; and (4) endow such acts with efficacy, normativeness, and pertinence.

Q. At the center of concern has been aggressive and antisocial behavior. All in all, how large is the effect?

A. Media violence is one cause of aggressive behavior in children and adolescents, but it is certainly not the only factor. Its importance lies in the fact that of all influences on human behavior, the media would be the easiest to change. When 22 separate estimates of the size of media effect were collated from the various surveys, the result was approximately 5–15%.[19,21] But this may represent a significant underestimate. First, according to statistical axiom, the unreliability of measurement reduces the degree of association that can be determined. In media research, the measures of behavior and exposure are far from perfect. Second, the ubiquity of television results in the absence of any control subjects with truly low or zero exposure. Low-exposure groups still have a substantial degree of viewing and knowledge about the violence contained in television programming. Thus, the associations reflect a narrow range of television experience.[21] The last time a "naturalistic" study was possible—Williams' investigation in the 1970s of children in a Canadian town ("Notel") before and after the introduction to television into the community—the results were clear and impressive: children became more violent (and less creative) in their play, compared with two control communities that already had television (Fig. 5).[69]

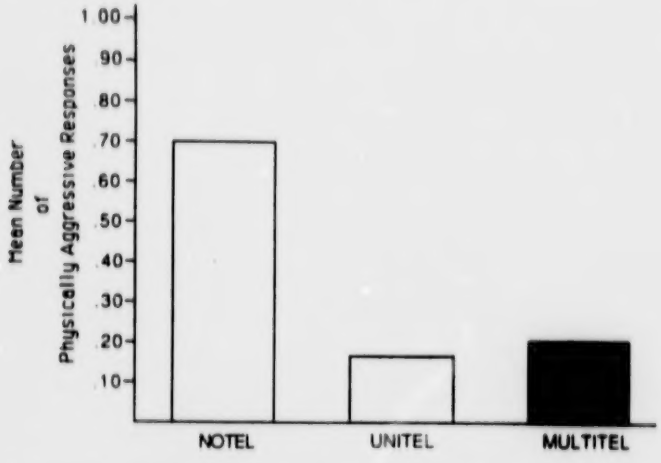

FIGURE 5. Introduction of television into a community that previously had none (Notel) resulted in a significant increase in the mean number of physically aggressive responses among Notel children when compared with children from communities with one TV channel (Unitel) and multiple TV channels (Multitel). Based on data from Williams.[69] From Liebert RM, Sprafkin J: The Early Window: Effects of Television on Children and Youth, 3rd ed. Copyright ©1988. Reprinted with permission of Allyn And Bacon.

Q. How serious is the effect?

A. Most of the research deals with interpersonal aggression. Although the kind of acts involved do not usually lead to criminal charges, they are occurrences to which most people would object if they were the victim—e.g., name-calling, lying, hitting, stealing. Overwhelming evidence indicates that adolescents with more exposure to television violence demonstrate more frequent behavior of this kind.[20,22] Few studies have examined criminal behavior. However, the results of such studies parallel the results in studies of interpersonal aggression.[20,22,52]

Q. Then media violence has an effect on crime?

A. The evidence points to such an effect. One meta-analysis[52] that specifically examined this connection found more than a dozen studies in which burglary, theft, or criminal violence could be linked to exposure to violent entertainment. The association was statistically significant and strong enough that dozens of similar studies with contrary results would be necessary to reverse the association. In the jargon of the meta-analysts, the numbers are "fail-safe."[51]

Centerwall's remarkable study of homicide rates in South Africa, Canada, and the United States found in the latter two countries a lag of 10–15 years between the introduction of television and a subsequent doubling of the homicide rate—exactly what one would expect if television violence affects primarily children (Fig. 6).[17] Centerwall asserts that long-term exposure to television violence is a causal factor in approximately 10,000 homicides per year in the United States and perhaps half of all rapes and assaults.[16,17] A similar study of larceny in the United States found similar results.[37]

Q. What is the evidence to support desensitization and cultivation?

A. The evidence is modest compared with that for behavioral outcomes. The findings suggest, however, serious consequences. At the least, a dulling of sensitivity to media

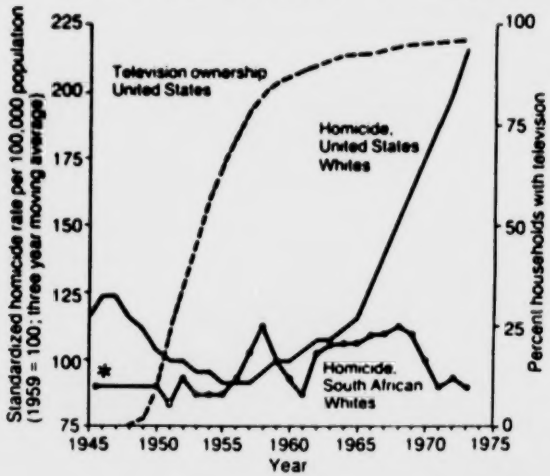

FIGURE 6. Results of a unique naturalistic study by Centerwall, comparing homicide rates in the United States and South Africa according to when television was introduced (in the 1950s in the United States; not until 1975 in South Africa). From Centerwall.[17] Reprinted with permission.

violence may set the stage for greater amounts of violence as the media compete to excite their audiences even more. An increased callousness toward victims may also result. The cultivation effect may favor wariness in human interaction, perhaps even a violent response in certain circumstances. The two complement each other to support an increase in aggressive and antisocial behavior.

Q. What can be done?

A. The primary goals must be education, training, and guidance (Fig. 7). The media seem beyond any effective remedy, and programming executives continue to try to discredit the voluminous and convincing research. Although the First Amendment places constraints on what the government can do,[3] the Federal Communications Commission (FCC) is empowered to regulate television. Sadly, it has progressively relaxed its authority and guidelines, especially for children. After the Children's Television Act of 1990 was passed by Congress, the FCC adopted apparently more stringent rules for "educational and cultural" children's programming; but it has allowed stations to satisfy the rules by claiming that violent superhero cartoons teach lessons about bravery and leadership.[27] It has ceased to bar "program-length commercials"—entertainment features built wholly around toys (often violent) for sale.[20,23] The FCC has taken no forceful action regarding program content.

Recently, Congress has threatened to intervene. Senator Simon's Television Violence bill, also passed in 1990, allowed the networks to meet and discuss guidelines for programming (Table 4). Unfortunately, the discussions did not include FOX network or any cable networks, and the resulting guidelines are purely voluntary. It is highly unlikely that the media will act responsibly. Their behavior is dictated by the marketplace. In fact, current American television programming exists almost solely to try to deliver an ideal demographic audience to advertisers. The three major networks will continue to brandish codes that purportedly restrain excesses of all sorts.

FIGURE 7. A political cartoonist's view of television violence. Reprinted with permission.

TABLE 4. Joint Network Standards on Television Violence

Voluntary limits on:
- Gratuitous or excessive violence
- Glamorous depictions of violence
- Scenes showing excessive gore, pain, or physical suffering
- Scenes showing uses of force that are "on the whole" inappropriate for a home-viewing medium
- Replicable, unique, or "ingenious" depictions of inflicting pain or injury
- Portrayals of dangerous behavior or weapons that invite imitation by children
- In children's programs: realistic portrayals of violence that are unduly frightening
- Gratuitous depiction of animal abuse

Encourages:
- Portrayal of the consequences of violence
- Scheduling all programs with regard for the likely composition of the intended audience

Urges caution:
- In stories and scenes showing children as victims
- In themes, plots, or scenes that mix sex and violence (e.g., rape)

From news release, Senator Simon's office, Washington, DC, December, 1992.

But the telltale signal was given several years ago when all three discharged the majority of their "programs and practices" personnel whose job was to enforce the stipulations.

Hollywood, too, is touting its apparent progress: an industry study found that PG-rated films were three times more likely to gross $100 million than R-rated films[32]; hence, the recent push to get a PG-13 rating for *Jurassic Park* and *The Last Action Hero*. However, Hollywood trends are always short-lived, and the concern of the industry stems from profit margins, not from overriding concern for the health and welfare of American children and adolescents.[32,68] Violence in films will be back (if, indeed, it ever disappears).

The data make it clear that we have to start with the child to have an effect on the adolescent or the adult. Better programming is certainly one option. The United States is the only country in the Western world that does not provide even a single hour of educational programming for children on any of its major commercial networks.[23] Palmer, who pioneered the use of research to design educational programs with *Sesame Street*,[53] has proposed an ongoing federal Endowment for Children's Television to finance programming for weekends and weekday afternoons at an estimated annual cost of $1.50 per child. Programs not only would be entertaining but also would have educational and cultural value—as alternatives to commercial offerings, such as violent cartoons, action–adventure series, and increasingly suggestive television talk shows. Countries like Japan and Great Britain have superior public television programming for children in part because they learned from early American mistakes and did not underfund their public broadcasting system.[53]

Another option to improve current programming is a new, noncommercial broadcast network, devoted exclusively to educational children's progams.[60] A third option is to levy a 10–20% windfall profits tax on the merchandisers of television-based products (e.g., Ninja turtle paraphenalia, which even in 1992 still grossed nearly $200 million) and to direct the funds into more and better children's programming. Noncommercial funding is also needed for programs that address the special psychological and social needs of teenagers. A new health curriculum based on the excellent *DeGrassi High* series has been piloted and has proved effective and useful in schools.[59] Such steps as these are not solutions, however; they would merely provide experiences for some children and adolescents with programming that is not currently available to them.

This leaves the public—parents, schools, communities—with two alternative (but possibly synergistic) strategies: (1) minimize the impact of the media on young people or (2) maximize their resistance to its influence.

Huesmann has shown that forceful and explicit indoctrination in the classroom about television violence can mitigate much of its adverse effect.[39] Thus, we are led to advocate the psychologically sound principle of teaching young people, in school and at home, to understand how television works and to anticipate their responses to media violence—so-called "media literacy."[25,57,58] Media literacy programs also teach children and adolescents about the media—the profit motive, the use of sensationalism to attract audiences, the unrealistic use of violence as a staple because of its guaranteed audience.

The second possibility is more demanding and fundamental. It involves dampening the influence of the media by manipulating the basic factors through which they affect behavior. In the case of aggressive and antisocial behavior, this means the degree to which an act is perceived as utilitarian (efficacy), the degree to which it is deemed acceptable (normativeness), and the degree to which it is judged to be right for the individual in question (pertinence). To counteract desensitization, one must learn empathy and a concern for others. To counteract cultivation, one must gain knowledge of the world. These are no less than the fundamental lessons of living, but they are the lessons that can make a difference.

We can try to improve the media. We can try to make young people more capable of dealing with the troublesome content that they witness on television and in the movies. But no matter how satisfying these strategies are to consider or how important they are to attempt, they will inevitably fail. As a last resort, we may need to turn to the central elements that govern behavior—the beliefs, values, and practices that young people bring to the media.

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Mass Media, Sex and Sexuality

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• Teen girls spend more than $4 billion annually on cosmetics.[20] Girls who have not yet finished growing are engaging in often painful and expensive cosmetic surgery.[19]

• The average age of first sexual intercourse is 16.2 years for girls and 15.7 years for boys and significantly lower for some subgroups.[58] One study found that among inner-city black males the average age of first intercourse is 11.8 years.[14]

• From one-fifth to more than one-third of 15–19-year-olds use no contraceptive or an ineffective one.[53]

• One of every 10 girls under the age of 20 becomes pregnant in the United States each year, more than in any other industrialized country in the world.[35,37]

• As many as 1 out of 6 sexually active adolescents has a sexually transmitted disease, and adolescents are at increasing risk for contracting HIV.[1,36]

These are alarming statistics. As parents, researchers, and physicians, we seek reasons for such patterns of sexual behavior. Who or what is responsible? Many of the parents of today's adolescents lived through the "sexual revolution" of the 60s, but today find their children's early and unprotected sexual behavior disturbing, if not frightening. Their own confusion about what to tell their children leads many to say nothing or to say less than their teenager would like to know. Even though teenagers often rank their parents as an important source of information about pregnancy and contraception, most say that their parents have not provided enough information.[43,48]

Although the HIV/AIDS epidemic has pushed schools toward more comprehensive family life/sex

education curricula, many adolescents still do not get adequate information at school, and often the classes are taught after the teenagers have begun sexual activity.[17,39,46] Other social institutions, such as organized religion, on the whole, still claim that abstinence until marriage is the best policy, and this message appears to work with only a small (but perhaps growing) minority of adolescents.

In this context, it is easy to see why we shift the blame to the mass media, especially television, for our children's sexual behavior. Children and adolescents, on the average, spend more time with media than with any other socialization agent, and the media they choose are full of messages about sex and sexuality. Adolescents cite mass media as important sources of sexual information. In one study, a sample of 14–17-year-olds rated friends and media as more important sources of information than either parents or institutions such as school or church.[27]

Adolescents today are what Bob Pittman, the founder of MTV, calls "TV babies"—they have grown up with mass media, and they quickly become sophisticated users of a variety of media. Many adolescents use more than one medium simultaneously: they watch television, listen to music on their headphones, and read a magazine all at the same time. Although adolescents actually spend less time with television than any other age group, they still, on the average, are in front of a television 3–5 hours a day (even during the school year). Music is the adolescents' medium of choice, and most spend even more time listening to music than watching television. Teenagers also are avid magazine readers.[25] We found in a recent large-scale survey of 12–14-year-olds in the Southeastern United States that more than half of African-American and almost three-fourths of Anglo teenagers read at least one magazine.[41] Girls move quickly from magazines such as *Young Miss* and *Seventeen* to *Cosmopolitan* and *Vogue*—all magazines that promote the idea that a woman's primary task in life is to be physically attractive enough to catch a man.[47] Teen boys, in contrast, prefer *Sports Illustrated* and a variety of magazines that promote special interests such as specific sports and music.[41] Adolescents also are frequent movie viewers, and now the videocassette recorder provides the flexibility and choice so important to this age group.

Given that the media are an important part of adolescent lives and potentially an important agent for sexual socialization, what do we know about the role media play in the sexual lives of children? Are the media as important as we may think they are?

Over the past decade the three of us have independently studied the role of the media in the sexual socialization of adolescents. The initial compilation of our work was published in the book *Media, Sex and the Adolescent*.[24] This chapter draws on our findings and the work of others in an attempt to update current knowledge. We begin by looking at the sexual content of the media. What kinds of sexual messages are in the media used by adolescents? How prevalent and consistent is sexual information? Next, we look at how consumption of sexual information in the media is influenced by a number of different factors, including gender, race, and family composition and interaction. All adolescents do not choose the same diet of sexual content. What they choose, who they are, and what they already know as they pay attention to the content affects what they can and do learn. We look at how sexual content is interpreted by and affects adolescents, and finally, briefly consider the future of the media as "sex educators."[5]

SEXUAL CONTENT IN THE MEDIA

The mass media include images and commentary on a wide range of sexual behavior. Prime-time television programs, daytime serials, music videos, song lyrics,

books, magazines, films, videos, and cartoons contain references to sexual activity. In general, studies suggest that sexual content is increasingly explicit and rarely (although more frequently since the HIV/AIDS epidemic) portrays or refers to responsible sexual behaviors, such as limited partners and use of contraceptives for prevention of either pregnancy or disease.[44,45]

Television. Content studies of sex in soap operas and on prime-time programs show that over the past decade implied and verbal references to sexual intercourse and other kinds of sexual behavior, including prostitution and homosexuality, have increased, although fewer than 1 in 10 incidents of sexual intercourse have any visual component. Sexual behavior occurs on the average 3 times per hour during prime time. The typical adolescent viewer who watches an average of 3–5 hours of television per day thus would see a minimum of 2,000 sexual acts per year on television alone.[28]

Other media add significantly to the sheer quantity of sexual behaviors to which adolescents are exposed (Table 1).

Music and Music Videos. About 75% of popular song lyrics refer to love and sex,[3,52] and 60–70% of music videos contain portrayals of sexual feelings or impulses.[4,52] Adolescents view an average of 2 hours per week of music videos (an average of 72 minutes of sexually-oriented content each week); two-thirds listen to sexually explicit lyrics on radio and other recorded sources on a regular basis.[10]

Research suggests that adolescents can and do understand the lyrics, themes, and sexual messages embedded in songs.[31,34] Popular songs such as "[When I Think about You] I Touch Myself," "I Want Your Sex," "Damn, I Wish I Was Your Lover," and "Let's Get Sexual" deal explicitly with masturbation, lust, and sexual intercourse. Rap songs such as "Wild Thing" also describe sexual activity, although frequently in more idiomatic terms. Heavy metal songs typically include four basic themes that frequently intermingle within a single song: (1) sex, (2) suicide, (3) violence, and (4) satanism.[34] The focus in heavy metal lyrics is often on problems with sex and love, as in the Guns 'N' Roses song, "I Used to Love Her But I Had to Kill Her."

Music videos may be especially influential sources of sexual information for adolescents because they combine visuals of adolescents' favorite musicians with the music. Many of the visual elements are sexual.[33] Videos such as Elton John's "The One" depict nude couples with their bodies entwined. "Let's Talk about Sex" visually portrays both the positive aspects (physical enjoyment, male-female relationships) and negative aspects (AIDS, unwanted pregnancies) of sex. Many popular recording artists such as Madonna, Cher, and Prince have made sex a common theme in

TABLE 1. Trends in Media Content Favored by Teenagers

Television
Adolescents view about 57 sexual behaviors on afternoon television and 143 during prime time each week
Depictions of sexual intimacy are increasingly explicit, although the majority still are verbal references rather than visual depictions
Sex between men and women not married to each other is four to eight times as common as sex between married couples
STDs, AIDS, sexuality education, birth control or abortion still are almost never mentioned
Music and music videos
Almost three-fourths of all song lyrics are about love and sex
About two-thirds of music videos portray sexual feelings or impulses
Movies
The typical R-rated 90-minute film includes between 14 and 21 intimate sex acts, and unlike television, most acts are visually portrayed

everything they do: song lyrics, books, movies, music videos, interviews, posters, and publicity.

Movies. Content analyses find that virtually every R-rated film contains at least one nude scene and some of adolescents' favorites, such as *Fast Times at Ridgemont High* and *Porky's* contain as many as 15 instances of sexual intercourse in a single film.[29] R-rated movies contain 5 times more violent and/or sexually violent activities than either X-rated or XXX-rated movies.[57] Greenberg and colleagues[30] summarized the differences between R-rated movies and television as follows:

> The typical hour-long television program . . . will provide between two and three intimate sex acts, and most likely, there will be discussions/conversations about what someone is doing or has done, with the visual components quite rare. The typical 90-minute R-rated film, on the other hand, yields seven times that amount of sexual activity, with a large proportion made manifest through visual images (p 56).

Magazines. Magazines such as *Cosmopolitan* and *Vogue* present beautiful, sexy, scantily dressed models on their covers and offer a variety of articles on sexual activity and heterosexual relationships directed at female readers. The February 1993 issue of a popular teen magazine, *Young and Modern,* included a self-test on kissing ability, complete with suggestions for improvement should one's score be too low. The same month's issue of the most popular magazine among young adolescent girls, *Seventeen,* included an article titled: "Sex: How Much DON'T You Know?" (Fig. 1).

More explicit sexual depictions and information is offered to young males in such magazines as *Playboy, Oui,* and *Penthouse.* Even magazines that purport to be interested in other topics, such as music, use sexuality to increase sales. On the cover of a recent issue of *Rolling Stone,* a favorite among older adolescent boys, three male members of the Red Hot Chili Peppers rock group posed in the nude (Fig. 2).

Advertising. Advertising is notorious for using sex to sell products. Research shows that between 60–70% of advertisements portray some sort of personal relations, and the 5% that specifically portray sexuality[42] are likely to appear in media targeted to young people. In one issue of *Rolling Stone* (February 4, 1993), for example, an advertisement for Swatch watches proclaimed, "We do it deeper;" an advertisement for Obsession perfume contained a photograph of a nude man and woman, lower bodies pressed tightly together while standing on a moving swing; and an advertisement for Guess jeans consisted solely of a busty blonde woman in a wet and revealing dress.

Together, television, movies, videos, popular music, and print media present an impressive array of sexually oriented messages available to adolescents. From an adult's point of view, most of these messages promote sexual behavior as desirable and consequence-free. Some types of media also grossly exploit women's bodies and glamorize sexual violence.

Sexual Exploitation. In R-rated movies now available to adolescents via pay cable channels and videocassette rentals, the predominant form of sexually violent behavior is individual or group rape, followed by exploitative/coercive sex in which the male dominates the female.[57] Approximately 80% of the nude scenes in these films depict female nudity without male nudity; in fact, instances of female nudity exceed those of male nudity by a factor of 4 to 1. Full frontal nudity is more common for females than for males.[29] Similarly, music videos frequently portray female nudity apart from male nudity and present images that suggest female bondage or present a single female as the object of desire for more than one male.

A cut from the Choice's latest rap album, entitled "One Just Ain't Enough," for example, describes a woman's experience of "awakening in a near stranger's bed,

Seventeen/Jeffrey Thurner/Outline

FIGURE 1. Cover of the February 1993 issue of *Seventeen* magazine. Reproduced with permission.

walking into a potential gang rape in the living room—and being aroused" (*Rolling Stone*, May 28, 1992, p 55). Members of the rap group 2 Live Crew have been arrested more than once for performing songs that glorify male sexual exploitation of females. Album covers have depicted a variety of demeaning sexual images, such as a male skeleton reclining after apparently raping a female skeleton (the original album cover for a Guns 'N' Roses release).

Clearly, frequent sexual activity is implied and often explicitly depicted in the media available to today's adolescents. Sexual content ranges from images of male and female beauty to depictions of sexual violence. Negative consequences or responsible sexual behavior rarely are portrayed. But some media and some genre are more likely than others to include sexual references, and today's teenagers have a

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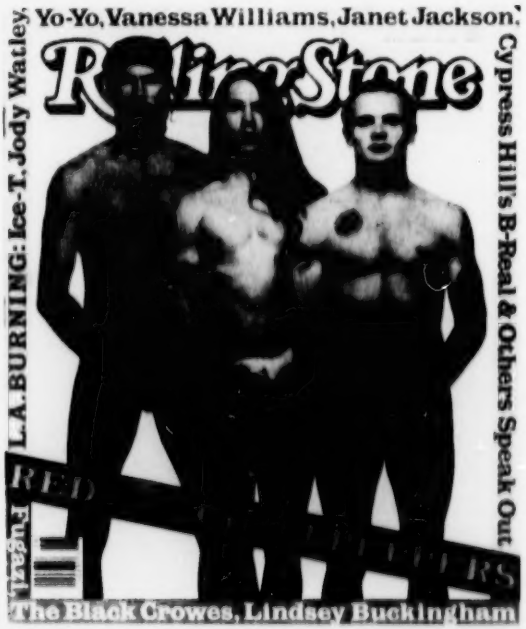
Yo-Yo, Vanessa Williams, Janet Jackson
Rolling Stone
L.A. BURNING: Ice-T, Jody Watley
Cypress Hill's B-Real & Others Speak Out
RED
The Black Crowes, Lindsey Buckingham

FIGURE 2. Cover of the June 25, 1992 issue of *Rolling Stone* magazine. Reproduced with permission.

great deal of control over what media content they attend to. Not all teenagers choose the same diet of sexual messages.

INDIVIDUAL DIFFERENCES IN THE SELECTION OF SEXUAL CONTENT

Gender Differences. Although it may be a popular notion that adolescent boys are more oriented to sexual interests and sexual content in the media, strong evidence indicates that adolescent girls spend more time with television and thus are exposed more consistently and more frequently to sexual content.[26]

Based on the questionnaire responses of 1,200 ninth and tenth grade students in urban high schools in Michigan, Greenberg and colleagues found that, on average, adolescent girls as compared with their male agemates, watch 1 hour more of soap operas each afternoon (actually spending more time watching soaps than watching prime-time television) and thus experience 2.5 times the number of sexual acts and references. Even in prime time, the television fare chosen by girls contains more sexual content than that chosen by boys. Girls are more likely to watch what constitute evening versions of daytime soaps (when the study was conducted, the most popular versions were *Dallas* and *Dynasty;* more recently their counterparts are teen dramas such as *Beverly Hills 90210* and *Melrose Place*).

Although adolescent girls are likely to talk about television and to view television with their parents more often than adolescent boys, Greenberg found no differences by gender in limits on viewing, controls over content choices, or other forms of rules. The parents of male and female teenagers are equally *unlikely* to

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monitor their child's television viewing. In fact, many teenagers have a television set in their own room, thus decreasing the probability that a parent will know what is being viewed. In a 1989 study in Michigan, more than two-thirds of sixth graders and almost three-fourths of tenth graders said they "had their own personal TV set."[25]

Adolescent boys and girls are likely to see equivalent numbers of R-rated movies at local theaters. In the Michigan study, both male and female 14- and 15-year-olds reported having seen an average of 7 of the 50 most popular R-rated movies in the past 3 years in a theater, even though they were required to be accompanied by an adult. Boys and girls were equally likely to rent R-rated videos to watch on their videocassette recorders. However, boys were more likely than girls to choose R-rated movies on standard or pay cable television channels, and boys tended to have seen more R-rated movies overall (about 15 of the list of 50). The girls reported discussing movies more frequently with their parents, and they also were more likely to attend movies with their parents, boyfriends, and girlfriends. Of interest, the boys were more likely than girls to report that their parents took them to see R-rated movies.

Older male adolescents show a stronger orientation to more lurid, hardcore sexual content than younger males or females.[10] Surveys with 178 high school students and 609 college students in 1990 showed that college males made more use of explicitly sexual music lyrics, explicitly sexual books, X-rated films, mail-order pornography, and other hardcore materials than females (Table 2). But males and females were equally likely to view R-rated movies.

A critical factor in differentiating the genders is the extent to which boys accept traditional sex-role stereotypes. Walsh-Childers and Brown[56] found that girls who were less accepting of the prevailing stereotype that men are dominant in relationships were more likely than those who accepted such stereotypes to watch traditionally male-oriented programming (e.g., action-adventure and sports) and presumably less likely to be fans of day or evening soaps. Such findings suggest that teenagers may seek sexual content that reinforces their existing sexual beliefs.

Racial Differences. African Americans spend more time watching television than white Americans, whether they are children, teenagers, or adults. In general, minority youth are more dependent on television and less selective in choosing which programs to watch; they tend to watch more of whatever is available and attribute more credibility to what they see.[22,23] Network ratings indicate that African Americans are more likely than white Americans to choose shows that feature black performers.

In a sample of 500 black and 600 white adolescents from the same schools in Michigan, Greenberg found that the black youth watched 1.5 hours more of television each day than white youth.[21] The additional viewing included 40 minutes of prime time and 50 minutes of daytime soaps. Although black youth did not seem to be choosing sexier content, their higher level of overall viewing provided 15 additional sexual acts and references each week. The minority youth also reported fewer television rules in their homes and a greater propensity for watching television by themselves.

TABLE 2. Exposure to Different Sources of Sexual Content

	Television Sexual Content	Movies rated R for Sex Content	Hardcore Sex Content
Gender	Females > Males	Females = Males	Males > Females
Race	Blacks > Whites	Blacks > Whites	Blacks = Whites
Family Structure	2 parents < 1	2 parents < 1	(not obtained)

The pattern is the same for movie watching inside and outside the home. Black youth reported watching more R-rated movies in theaters (both groups were underage for unaccompanied viewing of R-rated films) and on television, whereas the white youth identified more PG moviegoing; the two groups watched the same number of R-rated videos. Overall, the R-rated movie was a larger portion of the movie diet of black adolescents, who were far more likely to go out to a movie with their boyfriend or girlfriend than white adolescents were. Among older adolescents, Buerkel-Rothfuss et al.[10] found no racial differences in use of hardcore or pornographic materials.

At least through the 80s, African-Americans were seldom prominent in sexual scenes on television primarily because the few black (and Hispanic) television characters are children and preteens. Thus, most of the models of sexual behavior available for young black viewers are white, which may minimize their impact and make the few black characters who are sexually active even more compelling. Black media models' orientations to issues such as safe sex, premarital sex, and extramarital sex may be particularly salient to young minority viewers.

Interpretation. Black and white adolescents sometimes see sexual content differently. In one study, for example, black male adolescents who watched soap operas grew increasingly accepting of certain stereotypes (e.g., men are dominant in relationships, and women are concerned only about whether men like them), whereas white male adolescents who watched similar content grew less accepting of such stereotypes.[56]

Analysis of older adolescents' interpretations of Madonna's controversial music video, "Papa Don't Preach," found that black adolescents, especially males, were more likely to focus on the father-daughter relationship, whereas white adolescents focused on a pregnancy theme.[8] A majority of the black male viewers did not think that the girl in the video was pregnant, whereas almost all of the white female viewers saw the video as the story of a girl who tells her father that she is pregnant and has decided to keep her baby. To many of the black males, the "baby" Madonna is singing about is the girl's boyfriend, not an unborn child (Table 3). In another of Madonna's videos, "Open Your Heart," which depicts Madonna dancing in a peep show, most black college students found no clear theme, whereas the whites said that sexual perversion predominated.

Thus, similar media experiences may result in different outcomes, depending on who the viewer is when he or she comes to the viewing situation. We must be careful not to assume that all adolescents will interpret or be affected by sexual content similarly.

Family Structure Differences. The amount and kind of television young people view is closely related to their parents' viewing patterns.[16,18] Parental mediation in the form of coviewing (viewing together) and/or discussion of television has been shown to facilitate the learning of prosocial values and to inhibit the learning of antisocial values.[2] The question is how media practices, especially sexual media practices, may differ as more and more families fall outside the traditional structure of two-parent families. Many of today's young people have multiple sets of

TABLE 3. Reactions to Madonna's Music Video, "Papa Don't Preach," by Race and Gender

	Black Male (n = 28)	Black Female (n = 40)	White Male (n = 54)	White Female (n = 64)
Mentioned pregnancy as retold story	43%	73%	85%	97%

parents and a variety of step-siblings with whom they live. Bumpass[12] claims that half of all children in this country will spend some time in a single-parent family.

What do we know about differences in use of media engendered by different family structures? Earlier studies have shown that "latchkey" children and children who live with more people view more television.[15,51] Stanley and Greenberg[54] found that adolescents in homes with two original parents watched one half hour less of soaps and a quarter less of prime-time television each day than teenagers with only a mother or a mother and stepfather at home. Teenagers in intact homes thus were exposed to less sexual activity on television at all parts of the day. Teenagers with two parents present, either from a first or subsequent marriage, were more likely to have household rules about television viewing. The diet of R-rated movies also was lighter among youth who lived with their original parents.

Overall Differences. Analyses that sort out the relative effects of these various factors suggest that gender and race are of primary importance. In general, girls and black adolescents are exposed to greater amounts of sex on television. However, regardless of gender or race, teenagers who watch television with friends and who have no viewing rules are most likely to watch the most sexual content on television. The chief factors related to more extensive viewing of R-rated movies are going to the movies in theaters and watching television with boyfriends or girlfriends. The more religious the teenager, the less likely he or she is to see such films.[28]

REACTIONS TO SEXUAL MEDIA CONTENT

Of course, the main question that interests most researchers, parents, and physicians is whether sexual content in the media affects the adolescent viewer. Does exposure to all this sexual activity cause teenagers to engage in sexual behavior earlier, with more partners, without protection? These questions, paradoxically, are also the most difficult to answer. A few studies have linked greater exposure to sexual content to initiation of sexual intercourse,[7,50] but the direction of causality was not clear. From these studies it is as reasonable to think that sexually active teenagers seek sexual content in the media as it is to think that exposure to sexual content caused teenagers to engage in sexual intercourse. Often researchers cannot ethically conduct the kinds of experiments needed to establish that exposure to sexual content in the media causes a specific kind of sexual behavior. Instead, researchers have concentrated on investigating what adolescents learn and how they interpret sexual content, with the assumption that such learning will affect subsequent sexual behavior. The growing accumulation of experimental, survey, and ethnographic studies suggests that teenagers are learning a whole array of sexual beliefs—from the role of beauty and marriage to interpretations of rape—from the mass media.

Beauty. High school girls who saw 15 commercials that emphasized sex appeal and/or physical attractiveness were more likely than girls who saw a set of neutral commercials to say that beauty characteristics were important for them to feel good about themselves and to be popular with men.[55] Another experimental study found that exposure to just 30 minutes of television programming and advertising that included ideal body images altered college women's perceptions about the shape of their bodies.[49] Male college students who watched one of the first television shows featuring glamorous women (*Charlie's Angels*) rated pictures of potential dates as less attractive than students who had not viewed the program.[40]

Premarital Sex. Adolescents who were shown a set of 10 music videos were more likely to find premarital sex acceptable than a comparison group who did not see the videos.[32]

Sexual Violence. College students who were exposed to about five hours of sexually explicit films over six weeks were more likely than a control group to express increased callousness towards women and trivialize rape as a criminal offense.[59]

Some of our recent studies suggest that such learning continues. Greenberg and colleagues asked 400 high school students to rate different sexual scenes taped from prime-time situation comedies and soap operas according to how funny, sexy, enjoyable, and acceptable for showing on television they thought each was.[27] The teens rated scenes from *Facts of Life, One Life to Live,* and *General Hospital* depicting intercourse between unmarried people as the sexiest. In contrast, they rated the most conventional depictions of sexual behavior, such as intercourse between married people (regular characters on two soap operas and Norm from *Cheers*) as the least enjoyable, funny, or sexy. The adolescents thought that prostitution scenes were the most funny (one of the scenes was from the situation comedy, *Night Court*). The homosexual scenes were rated as least acceptable for viewing on television and least sexy; such scenes were considered acceptable only if they were also funny.

Adolescents have clear preferences about how they want their sexuality presented. They may prefer depictions of unmarried sexuality because such scenes are more relevant than married intercourse. But the preference for humor around depictions of prostitution and homosexuality suggests that even today's supposedly sexually liberated teens find less traditional forms of sexuality acceptable only if ridiculed.

The same 400 students also viewed different sets of scenes and were asked to interpret the meaning of a variety of verbal references to sex—such as "solicitation," "getting in a family way," "shooting blanks," and "he thinks I'm coming on to him"—that either were or were not shown in their set of scenes. Students who viewed scenes including the sexually related phrases were more likely to know what the phrases meant than students who had not viewed the same scenes. The adolescents apparently were learning the sometimes obtusely coded language of sexual behavior from prime-time and soap opera content.

Another study with older adolescents suggests that long-term exposure to sexual patterns in different media may affect beliefs about sexual norms in the real world. In a test of Gerbner's cultivation hypothesis, Buerkel-Rothfuss and Strouse[11] found that college students who were frequent soap opera viewers were more likely to believe that more people in real life have sexual and relationship problems, such as divorce, illegitimate children, and sexually transmitted disease, and are more likely to engage in sex without love (e.g., rape, or using alcohol or drugs to get themselves or a partner ready for sex). Older adolescents who frequently watched music videos, viewed more X-rated movies, or who read sex manuals were most likely to perceive that males and females brag about sex and engage in sex frequently.

Such studies suggest that adolescents can and do learn about a variety of sexual behaviors from media. And what also becomes clearer is that adolescents may learn different norms and patterns of behavior, depending on what kinds of content they select and pay attention to. As discussed above, selection and exposure to content varies greatly among adolescent subgroups.

In an ethnographic study with a small group of early adolescent girls, Brown and colleagues[9] found further evidence that such selection may depend on what the adolescent needs or wants to know. There may be moments in an adolescent's life when information about sex and sexual norms is especially salient, and those are the moments when media depictions may have the most impact.

Based on journal entries, in-depth interviews, questionnaires, and tours of their bedrooms, the authors found three patterns of use of sexual media among a small

group of middle-class 11–15-year-old girls. One cluster of girls had not yet begun the heterosexual romantic rituals of hand-holding, kissing, and dating; they were less likely than girls who had entered the sexual world to be seeking and paying attention to sexual content in the media. The girls who had not yet had much sexual experience were most likely to describe the sexual content that they encountered as "gross" or "disgusting." They preferred not to see such depictions as nude women in advertisements or people making love in soap operas.

Another cluster of girls was more involved in "the work of romance" and paid a great deal of attention to sexual content in the media. Their rooms were filled with images of both males and females culled from magazines; they listened to the songs of their favorite musicians and sometimes tried to decipher the sexual messages. One 15-year-old girl, for example, wrote in her journal about trying to sort out the apparently contradictory messages of two popular songs:

> This song was about sex. This song was saying basically "come over to my house so we can do it!" This represents sex as being o.k. Later I heard "Let's wait awhile" by Janet Jackson. Which basically says "Let's not rush into it." It's kind of hard as a teenager to decide which is right. The guy who was talking about it as being good seemed happy with a carefree sound. Janet sounded sad and depressed. Even though I know it's better "to wait awhile" the other song was more appealing. It seemed harmless. They talk about it like "come over and have ice cream . . ." I really know which is the right way, but sometimes the way the media talks about it you really begin to wonder.

In contrast, the girls who had already entered the sexual world about which the others fantasized, were less sanguine about sexual content in the media. The girls who had had heterosexual intercourse were more critical of media images of sex and relationships that they saw. For example, rather than expressing fear of sexual violence as the less sexually experienced girls did, they critiqued violence against women as presented in the mass media. One sexually experienced 14-year-old girl analyzed the lyrics of the Motley Crue song, "Ten Seconds to Love," as follows:

> I think it's disgusting. If I was the girl he was talking to/about I'd feel like trash. If I was him I'd feel like a rapist. Forced sex seems to be fine if it's between boyfriend/girlfriend. That's not right, not right at all, even if they [the band] say it is. It makes me sick.

The sexually experienced girls were sophisticated users of the media, capable of looking beyond the image on the page or screen, but even they were constrained by the prevailing frame of heterosexual romance and sex promoted in the media. The authors returned 4 years after the initial interview to a girl who had been one of the most outspoken critics of the portrayal of women's sexuality and relationships in the media. Now 18, this girl said, "We have our little hopes and fantasies that we'd like to hold tight to. It is every girl's hope . . . that she'll marry her sweetheart or that they'll at least stay together for a long time."

MEDIA AS SEX EDUCATORS

We conclude that the mass media currently are important sex educators for American adolescents. Other potential educators, such as parents, schools and churches, still do an inadequate job, and even if they changed dramatically, the media that interest teenagers will remain compelling teachers. Some teenagers attend to more sexual content in the media than others, but all see, hear, and read at least some, probably on a daily basis. Some teenagers seek out such content, and some actively try to sort out the often contradictory messages they receive from various sources. Teenagers learn sexual vocabulary and develop beliefs about the sexual

world from media. Although we have relatively little evidence that such beliefs affect adolescent sexual behavior, it is hard to imagine that they do not.

We expect that the media will continue to play an important role in the sexual socialization of youth. All kinds of media, including those that more frequently include explicit sexual behavior (such as movies on videocassettes), are becoming more and more accessible to younger and younger children. ("Adult programming," i.e., X-rated, is cable television's fastest growing segment).[38] As youth become ever more sophisticated users of the media, they will become even more adept at seeking and finding the information in which they are interested at the moment. In a paradoxical way, such activity may give the media even more responsibility as sex educators. If teenagers realize that they can find the information they need in the media, they may rely even less on other sources. After all, the media never laugh at naive questions and often demonstrate many aspects of sexual behavior in living color with favorite music, beautiful bodies, and few consequences.

Is there any possibility of diminishing the negative effects of sexual content in the media? The HIV/AIDS epidemic, intensive lobbying in Hollywood by groups such as the American Academy of Pediatricians and the Center for Population Options, and a parallel cultural trend toward greater sexual conservatism have resulted in more references to safer sex and condoms in entertainment programming and in teen magazines and music.[13] Such efforts are important and should be encouraged and expanded.

For example, although "condom" is no longer a forbidden word on television (Fig. 3), the networks still refuse to run commercials for condoms as pregnancy prevention, and birth control is rarely mentioned in most media. Other important sexual topics, such as sexual orientation, are neglected or presented only in order to ridicule. Women still are presented too often as sexual objects who use their sexuality to ensnare men. And, yet, much too frequently, women in the media are punished for being too overtly sexual.

How about promoting safe sex by running condom ads?...
How dare you say the "C" word in mixed company!...
Network TV
THE NETWORKS
Condoms Inc.
Mike Luckovich

FIGURE 3. "How dare you say the C word?" (By permission of Mike Luckovich and Creators Syndicate.)

Given such contradictory pictures, it is little wonder that adolescents find the sexual world a difficult and often confusing place and that they engage in early and unprotected sexual intercourse with multiple partners. We believe that all potential sex educators, including the media, must take responsibility for showing children that sex can be an important and pleasurable part of human life and relationships and that sexual behavior includes potential risks and consequences. Researchers and health professionals can do more to work with the media to encourage and to persuade writers and producers that it is in the best interest of everyone that sexuality is presented in a way that allows children to make responsible, healthy decisions about their own sexuality.

We also can work to help children to become more critical users of the mass media that surround them. A number of countries now have mandatory programs for media literacy in their public schools. Such programs teach children how to read media images and encourage them to think about what they see and hear.[6] We also can monitor government regulations, such as the Children's Television Act, that restrict the amount of commercial time on children's programming and require educational programming for children. Such educational programming could include age-appropriate sex education.

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Effects of Media Alcohol Messages on Adolescent Audiences

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Young people typically begin drinking alcohol in early adolescence; by the time they graduate from high school, two-thirds have become regular drinkers, and two-fifths exhibit frequent binge drinking. Adolescent patterns of alcohol use and misuse are primarily shaped by personality characteristics, family and peer influences, and sociodemographic factors. Nevertheless, the mass media, particularly television messages about drinking, also play an influential role.

Among the wide variety of alcohol-related content in the media that may have an impact on youth, the three key types of messages are presented on television: (1) beer advertising centers on positive portrayals of beer drinking; (2) entertainment programming, particularly dramas, movies, and comedy shows, frequently depict characters using alcohol and experiencing positive and/or negative consequences; and (3) public service announcements (PSAs) typically warn against alcohol abuse and drunk driving. The vast majority of public attention and research has focused on these three topics.

Television advertisements, entertainment programming, and PSAs have differing influences on attitudes and actions, depending on how uniformly they portray widely valued attributes and consequences of drinking. Advertisements are designed consistently to highlight the advantages of the specific brand and of drinking in general, whereas PSAs promote either the advantages of moderate drinking practices or the disadvantages of excessive, hazardous, or underage drinking. To the extent that strategists employ the most persuasive techniques, the behavioral outcome is most likely to correspond to the objectives of the message. On the other hand, producers of entertainment media have purposes other than audience persuasion, and a varied

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mixture of favorably and unfavorably regarded aspects of drinking are featured; for example, a television soap opera may depict alcohol consumption as leading to both enhanced femininity and social embarrassment within the same episode. Thus, the net impact will not lean consistently in either a prodrinking or antidrinking direction.[5]

Several other types of messages merit brief mention. Newspapers and television newscasts often disseminate information about problematic outcomes of alcohol misuse, particularly drunk-driving accidents and health risks. Music videos have been used to present educational messages that discourage preteen drinking and teenage drunk driving. Both news and educational content have considerable potential for teaching adolescents about alcohol problems; exposure levels are limited, however, and little is known about the impact of such messages. In addition to television commercials, alcohol advertising appears in magazines and on billboards that may be seen by young people; the impact of these secondary channels is thought to be rather weak, although one study has shown that liquor ads in magazines influence teenage drinking.[8] Although theatrical films are popular among teenagers, the amount of exposure totals only a few hours per month, and drinking is seldom a major theme in the plotlines.

TELEVISION AND THE DEVELOPMENT OF DRINKING PATTERNS

Young people start forming attitudes and experimenting with alcohol at a time when they are heavily exposed to television. Younger adolescents are likely to be responsive to televised portrayals of drinking in entertainment programs and commercials for a number of reasons.

1. Television viewing time reaches a peak at this age, with 10–14 year olds averaging between 4 and 5 hours per day; the typical young person encounters thousands of commercials and fictional drinking incidents before initiation of actual drinking experience.

2. Young people depend relatively heavily on television for understanding and guidance. Drawing on "uses and gratifications" theory, they are expected to have a strong instrumental motivation to learn about drinking-related phenomena (based on curiosity and uncertainty about alcohol's taste, sensations, and consequences), and they seek intrinsic enjoyment from the entertaining style of drinking portrayals featured in programs and ads.

3. Young adolescents' low level of experience with alcohol and their limited opportunities for direct observation of drinking by others (especially in bars and at parties) makes them more susceptible to processes of cultivation and more receptive to vicarious observational learning. Because televised portrayals of drinking are primarily explicit, visual, and readily comprehensible, the less sophisticated stage of cognitive development in youthful viewers should not preclude learning about alcohol consumption and consequences (although understanding of character motivations may be restricted).

4. The attitudes and values of young people should increase their receptivity to certain televised appeals associated with drinking (e.g., fun, sociability, masculinity/femininity, and delicious taste) and to certain role models who are depicted drinking (e.g., powerful or attractive characters in programs and celebrities or athletes in commercials). Although the degree to which younger adolescents identify with adult-aged characters and personally relate to depicted drinking situations and outcomes, is in doubt, this uncertainty may be partially offset by their striving to achieve anticipatory socialization into the world of grown-ups. Thus the potential effect is considerable.

5. The social environment during early adolescence must also be taken into account. In general, the authority figures in their lives uniformly discourage alcohol

use; warnings and disapproval are dispensed by teachers, preachers, coaches, club leaders, law enforcers, many parents, and even some athletes, singers, and celebrities. By contrast, all advertising and most programming depictions present the positive side of drinking, which may undermine the effectiveness of the solid wall of anti-drinking messages that young people experience directly. Advertising's impact on legitimizing drinking and underemphasizing the perceived seriousness of alcohol may weaken the intensity of adult efforts to prevent adolescents' use of alcohol in comparison with unadvertised substances such as cocaine and marijuana; indeed, some parents condone drinking as preferable to drug-taking.

Peer influence, of course, plays an increasingly important role during the teenage years. To the extent that television enhances the perceived benefits and diminishes the perceived costs of drinking, young people may be more receptive to prodrinking enticements and pressures from friends. The favorable images and attitudes learned from televised drinking may also increase the likelihood that peer influence will be attempted.

Little empirical research into the effects of televised alcohol portrayals has been conducted among young people near the age of drinking onset. Therefore, the delineation of specific influences is primarily speculative, with a few references to fragmentary findings from the literature.

A more substantial research literature deals with effects of alcohol messages among older youths, particularly during high school years. Although television viewing declines to about 3 hours per day in middle and late adolescence, this age group is still exposed to thousands of alcohol portrayals each year. Older adolescents are likely to be motivated to learn about normative alcohol use and drinking consequences, and their value system is quite conducive to influence from the glamorous depictions of alcohol in ads and programs. However, the higher level of direct experience with alcohol and the increasingly mixed array of interpersonal influences about drinking may restrict the degree to which television depictions affect attitudes and behaviors.

In understanding the role of television in the adolescent's drinking decisions, a useful organizing framework is personal cost-benefit maximization. On the benefit side of the ledger, the individual considers various anticipated short-term rewards to be gained from drinking. Some positive outcomes are of a physiologic or sensory nature, such as enjoying the taste, relaxing, or attaining a pleasurable level of intoxication. The drinker also expects psychological benefits, such as self-confidence, escape from problems, and intensified feelings of femininity or masculinity. On the interpersonal or social dimension, advantages include gregariousness, sexual disinhibition, and male-bonding experiences.

Benefits are weighed against an array of cost or risk factors that constitute the drawbacks of drinking. Along with the obvious monetary expense of purchasing alcohol, the drinker may be concerned about physical liabilities that range from weight gain to cirrhosis, dizziness to hangovers, and diminished proficiency to accidental injury. Psychologically, consumption may be associated with depression, dependency, or guilt. Social costs are exemplified by embarrassment, belligerence, and rejection. Some negative outcomes lack immediacy for adolescents, because they are not manifested until long afterwards.

TELEVISION ADVERTISING EFFECTS

The most significant and intensively investigated issue relating to mass media and alcohol is the influence of beer, wine, and liquor advertising on teenagers. This

subject has been the focal point of several congressional hearings and a Surgeon General's Workshop[3,13] and has generated widespread debate involving health organizations, public interest groups, advertising agencies, alcohol companies, and the mass media.

Advertising Content and Audience Response

Each day the national media disseminate hundreds of alcohol advertisements via network television and radio, satellite cable, and mass audience magazines; ads carried by local newspapers and broadcast stations substantially augment this total in any given market. In monetary terms, almost two billion dollars per year are spent by alcohol advertisers. Beer is the most heavily advertised type of alcohol, with about three-fourths of the spending apportioned to television.

Two major content analyses of television and magazine alcohol advertising[8,14] reveal a wide variety of benefits linked to the product: delicious flavor, social camaraderie, masculinity, escape, refreshment, physical relaxation, femininity, elegance, romance, adventure. Many ads employ generic lifestyle themes that focus on the drinkers and drinking occasions rather than on the qualities of the product itself or brand imagery.[2]

Advertising can create or change cognitions, beliefs, attitudes, values, or salience priorities that contribute to the decision-making process. Although a single advertisement may briefly or superficially alter the equation, cumulative impressions over many exposures play a more central role. Certain effects may be brand-specific, but the similarity of predominant themes across brands suggests that most implications also apply to drinking in general.

Advertising can positively influence drinking behavior via a number of mechanisms that produce an advantageous benefit-to-cost ratio of transitory or persisting duration. The primary transitory effect is simple activation of the act of consumption; favorably predisposed persons are prompted to have a drink after exposure to a particular advertising message. This reaction can be traced to a reminder of the portrayed benefits of drinking or a triggering cue that merely elevates awareness of the drinking option. The observer is moved to grab a beer, to pour a glass of liquor, or perhaps to journey to a bar for a drink. The huge number of ads disseminated each year ensures that this effect will occur for many drinkers at least a few times annually, resulting in a small but measurable increase in consumption.

The persisting impact that gradually accumulates over dozens or hundreds of exposures is the most basic and profound consequence of advertising. This impact primarily occurs through development and reinforcement of favorable attitudes toward alcohol and drinking practices, mainly as a result of advertising-induced creation and changes of images and beliefs. Through persuasion processes of conditioning, social learning, instrumental learning, and reasoned action, these cognitive changes are translated into prodrinking attitudes and intentions.[5]

Whereas these impacts primarily involve benefit enhancement, certain cognitive effects also serve to reduce perceived costs. Three advertising-promoted beliefs may disinhibit drinkers through legitimization and rationalization: (1) drinking is a widespread norm, (2) alcohol is a harmless substance, and (3) deficit motivations such as escape and relief are acceptable reasons for drinking. Indeed, an implicit legitimizing meta-message is communicated to the public by the mere presence of beer and wine commercials in the broadcast media; in the context of the television-radio advertising ban for liquor (and other substances, such as cigarettes or amphetamines), rules permitting the advertisement of beer and wine imply that they are relatively innocuous, acceptable, proper, and normal.

Similarly, the omission of depictions of negative drinking consequences (e.g., hangovers, accidents, diseases, violence, embarrassment) may lead to the inference that alcohol consumption is safe and nonproblematic. Advertised associations between alcohol and mountains, seashores, pristine wilderness, or outdoor activities may also contribute to a benign image.

The agenda-setting process is an important consideration when the cognitive elements are combined into attitudes. Among the full range of alcohol attributes and consequences, the subset emphasized in ads will be weighed more heavily in the drinker's decision-making. The positive aspects of drinking stressed by advertising ascend in perceived importance, whereas relevant but unmentioned factors become relatively less central.

Simple gains in knowledge from informational content of advertisements can contribute to consumption in different ways. When a new type of alcohol is introduced on the market (such as premixed cocktails, low-alcohol beer, wine coolers, or clear beer), advertising provides awareness of the existence of the product and its novel features. In addition, less sophisticated consumers, such as adolescents, may use advertising information to become more knowledgeable about the manner of selecting or serving unfamiliar specialty drinks, such as finer wines, dark beers, liqueurs, or exotic mixed drinks; advertising can stimulate drinking by widening their alcohol horizons, providing expertise, and overcoming apprehensiveness.

Research Evidence on Advertising and Consumption

Three basic methods of investigation have been employed to study the effects of alcohol advertising: experiments, field surveys, and econometric investigations. The econometric studies rely on aggregate statistics across the total population and thus reveal little about the impact on teenagers. This chapter examines laboratory experiments and surveys with samples of high school students and young adults.

Advertising experiments feature manipulation of message stimuli and comparison of responses among randomly assigned audience subgroups who receive different treatments. A number of experimental studies have been conducted in the past decade, including six published investigations measuring actual consumption of alcohol (reviewed in detail by Atkin[6]). In the most recent experiment by Kohn and Smart,[18] wine commercials were interspersed in a lengthly television program viewed by young female subjects in an informal lounge setting. In the heavy-exposure treatment, subjects were shown 9 wine commercials; the light-exposure treatment featured 3 ads; and control subjects saw only ads for nonalcoholic products. At four points during the experiment, the women were given an opportunity to order either soft drinks or small servings of white wine. Women in the nine-commercial treatment drank significantly more than those exposed to little or no advertising. The other experimental studies have found a mixture of higher drinking and no significant differences between exposed vs. non-exposed subjects.

Several other laboratory experiments measured intention to consume alcohol.[8,9,15,17] Evidence from five laboratory tests shows that two thematic strategies widely employed in alcohol advertising, sexual imagery and celebrity endorsers, are effective for youthful drinkers.

The body of research using experimental methodology is the most well-developed domain of the alcohol-advertising literature. Unfortunately, the extensive efforts of investigators have not produced a conclusive answer to the basic question of whether alcohol ads increase consumption. This is partially due to the equivocal mixture of null and positive findings, which fails to provide a consistent picture across studies. The more basic sources of ambiguity, however, are the methodologic

deficiencies and the lack of conceptualization underlying the design of most experiments. Thus, apparent findings of no impact can be readily explained or even reinterpreted as indicating positive effects; data showing significant influence of advertising can also be dismissed.[6]

The other major approach to studying the impact of advertising is survey research, in which a large and fairly representative sample of people is asked questions that measure exposure to alcohol advertising and patterns of consumption. In the correlational survey, the degree of relationship between separate indices of exposure and behavior is calculated to determine if the more heavily exposed persons act differently.

Two key studies in the alcohol-advertising literature use the correlational survey technique with adolescents.[11,23] These investigations suggest that televised beer advertising mildly increases consumption of beer; despite divergent techniques of measurement, both surveys are consistent in suggesting a positive impact with correlations in the +.15 to +.20 range. For example, the survey by Atkin et al.[11] showed that teenagers scoring above the midpoint of the beer-commercial exposure index consumed substantially more beer: an average of 52% of the heavily exposed vs. 37% of the lightly exposed respondents indicated that they had tried each of six brands of beer listed in the questionnaire, and 46% vs. 29% reported drinking at least one beer.

Regression analyses indicate that these relationships are partly spurious due to the influence of demographic and social variables. Furthermore, correlational data always involve doubts about causal direction, but the predominant flow of influence appears to be from advertising to drinking behavior.[6]

Advertising and Initiation of Drinking

For predrinkers, advertising should be expected to have a sizable impact on brand awareness, knowledge about certain substantive attributes of alcohol, and perceptions of drinkers and drinking practices. Data from the junior high school portion of the sample in the Atkin and Block[8] correlational survey show that young teenagers readily learn the distinctive brand imagery and symbols in beer and wine commercials; there is a strong relationship between the advertising exposure index and awareness of brand names, slogans, logos, endorsers, and themes. The impact on generic knowledge is more modest (because of the limited informational content in ads), but the young teens who are heavily exposed are somewhat more cognizant of alcohol ingredients, processing steps, and calorie levels. The survey also shows that as exposure increases, young people are slightly more likely to perceive that drinking is more widespread and to hold favorable stereotypes of the typical beer drinker as fun-loving, friendly, happy, manly, and young.

Attitudinal predispositions are also expected to become more positive as early adolescents view larger quantities of beer and wine commercials. The mere repetition of exposure should increase their familiarity with alcohol products and drinking practices, resulting in a more comfortable feeling and greater liking; positive effect may also result from enjoyment of the humorous, exciting, or engaging qualities of the commercial messages in which alcohol is promoted. For example, a survey of 10–14 year olds by Neuendorf[21] found that one-fifth named a beer or wine commercial as one of their three favorite ads; the main reasons cited were humor and celebrities.

Another survey conducted in Scotland concludes that preteenagers and teenagers display a strong appreciation for televised beer ads.[1] The 10–13-year-old segment of the sample could recognize an average of 5 commercials (based on photographs of scenes from 9 commercials), and three-fifths named an ad that they liked. When

asked about the characteristics of alcohol commercials, almost half say that they are "humorous" and "stylish" and have "plenty of action," and three-fourths say that they have "good music."

The cognitive effects cited earlier may also translate into positive attitudes, along with the learned associations between alcohol and favorably evaluated attributes and consequences presented in lifestyle-oriented ads. Furthermore, because advertising discloses little information about the potency of the product or negative outcomes from improper use, young people may come to regard the product as relatively innocuous and risk-free. In the Atkin and Block survey,[8] a moderate correlation was found between amount of viewing and a 50-item index of prodrinking attitudes that included measurements of the appropriateness of drinking by teenagers; this relationship between exposure and attitudinal dispositions is stronger for the younger teens than for older teens and young adults.

A variety of theoretic processes predict that advertising produces behavioral intentions to consume alcohol and a higher probability of actual experimentation when opportunities develop. The Atkin and Block data[8] show a modest relationship between amount of advertising exposure and beer drinking and a slight relationship with wine drinking; however, many of the young teens in the sample had not yet begun drinking. For that subgroup, a question was asked about the probability of drinking in the future. The heavily exposed nondrinkers were more likely to anticipate future consumption than nondrinkers with below-average exposure; for example, 30% vs. 17% said that they "definitely" or "probably" would drink beer, and an additional 35% vs. 28% said "maybe."

In a recent survey investigation, Grube interviewed several hundred fifth- and sixth-grade school children, including large numbers of minorities.[16] An index representing exposure and recognition of television beer commercials was significantly correlated with knowledge of beer brands and slogans, positive beliefs about drinking (alcohol is related to sociability, relaxation, and reward for work), and intentions to drink as an adult. A causal analysis indicated that advertising exerted a strong effect on beliefs, which indirectly produced the expectation of more frequent drinking when older. On the other hand, exposure to and recognition of commercials were unrelated to beliefs about harmful consequences of drinking, such as drunk driving and health problems.

Advertising and Excessive Drinking

Beyond the effects on total consumption, alcohol advertising may also influence problematic forms of drinking in either a positive or negative direction. This influence can be considered in terms of direct effects as well as indirect effects via increases in levels of consumption. The key dimensions of alcohol abuse include excessive consumption, intoxication, and harmful consequences, such as strained relationships, poor school/job performance, and unsafe driving or recreational activities.

The content of alcohol advertising suggest little theoretic potential for most messages to increase directly the degree of alcohol misuse. Although ads may sell drinking, the manifest themes seldom sell problem drinking. Only a small proportion of models are depicted as intoxicated, and almost none display inappropriate behavior or exhibit symptoms of alcohol abuse. However, many ads implying that the product should be consumed heavily may be interpreted by some viewers as supporting excessive drinking, and ads emphasizing the escape motive for drinking may also reinforce this function. Thus, certain segments of the audience may be influenced to hold a more accepting attitude toward improper drinking patterns.

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Advertising has much greater potential to contribute to misuse through indirect processes. First, advertising promotes greater frequency of consumption at a wider variety of occasions, thus creating more opportunities for drinkers to exceed proper limits. Second, many television viewers, radio listeners, and magazine readers are already drinking at the time of exposure; the sheer volume of advertising increases the chances that they will encounter an ad that stimulates them to continue consumption, perhaps beyond the moderate level. Third, advertising reinforces prodrinking attitudes, which may be generalized by the individual to apply to excessive levels of drinking; if advertising leads a drinker to hold a more liberal view of normal drinking, this may carry over to a slightly more permissive view toward excessiveness. Similarly, some individuals may extrapolate certain conventional beliefs about the advertised benefits of alcohol, inferring that if three drinks enhance enjoyment or romance, then six drinks will be doubly romantic or enjoyable. Empirical research examining the impact of alcohol advertising on drinking problems is minimal. It is almost impossible to study such effects in controlled experiments because of ethical and pragmatic considerations. Several survey studies provide relevant findings.

The survey of adolescents by Strickland[23] measured five variables of alcohol misuse: (1) frequency of intoxication; (2) symptomatic consumption (e.g., drinking alone, sneaking drinks, rapid drinking, skipping meals); (3) negative consequences (e.g., specific drinking-related problems with family, friends, legal authorities, task performance and schoolwork, and general belligerence); (4) psychological involvement (e.g., drinking for reasons of tension relief, anxiety, and inadequacy feelings); and (5) self-reported seriousness of drinking problems. The one significant coefficient between advertising exposure and negative consequences is belligerence. The other coefficients are positive but weak. The causal connection is almost exclusively indirect, primarily operating via the impact of advertising on overall consumption, which in turn contributes to variables of abuse.

Atkin, Neuendorf, and McDermott[12] found that advertising exposure correlates moderately with the excessive drinking index. Respondents above the median in exposure reported consuming an average of 4.5 drinks during a typical evening at a party or bar, compared with 2.9 drinks for respondents with lower exposure. In the high-exposure subgroup, 33% said that they consume 5 or more drinks at least once per month, whereas 16% of the less exposed respondents reported monthly frequency of heavy drinking. In addition, highly exposed young people are more likely to report that they worry about drinking too much and get into trouble because of drinking. Further analyses indicate that these raw figures are somewhat inflated and that most of the impact of advertising appears to be operating indirectly through increased consumption.

Advertising and Drunk Driving

An increasing public concern in recent years is the role of alcohol in accidental death and injury, especially drunk driving. Advertising has been cited as one of many factors that may contribute to drinking in the context of automobile driving and other activities that are hazardous when combined with alcohol consumption, such as boating, swimming, skiing, and team sports.

A slight potential for direct effects of advertising is based on the occasional portrayals that juxtapose moving cars with scenes of beer drinking in television commercials, the association of alcohol and racing cars (as well as speedboating, skiing, boating, and horseback riding), and the more subtle linkage between alcohol and the challenging excitement of speed and risk-taking.

Advertisements rarely warn the audience about the dangers of drinking before or during driving or sporting activities, which precludes learning about these risks and possibly deemphasizes the salience of such concerns. Indeed, the portrayal of characters consuming alcohol away from home settings without any recognition of how they will achieve safe transportation may lead the audience to infer that safety is not a significant issue to the depicted drinkers.

Advertising may also produce indirect effects that increase the likelihood of drunk driving by stimulating greater frequency and quantity of drinking.

Atkin, Neuendorf, and McDermott[12] examined the association between advertising exposure and an index composed of five items dealing with driving after drinking, drinking while riding, drinking while parked, drunk driving, and estimated drink limit for safe driving. The moderately positive correlation between these indices is exemplified by cross-tabulation analyses comparing persons who are above average with persons who are below average in exposure level. Of those above the median in exposure, 39% reported having driven a car soon after drinking during the month before the survey, compared with 25% of drivers below the median. The difference for driving while riding in the previous month is 47% vs. 31%; for driving while parked, 31% vs. 19% difference. At least one lifetime incident of driving a car "when you were really too drunk to drive" is reported by 39% of the highly exposed vs. 28% of lightly exposed respondents. The high-exposure subgroup said that they can drive safely after consuming 3.2 drinks, compared with 2.7 drinks for the low-exposure subgroup. Again, only a portion of the effect appears to be directly attributable to advertising messages.

The preponderance of the evidence indicates that alcohol advertising stimulates more favorable predisposition, higher consumption, and greater problem drinking by young people. Nevertheless, the evidence clearly does not support the interpretation that advertising exerts a powerful, uniform, direct influence; it appears that advertising is a contributing factor that increases drinking and related problems to a modest degree rather than a major determinant.

TELEVISION ENTERTAINMENT EFFECTS

The fictional world of television programming features a large number of superficial portrayals of ordinary drinking acts and occasional depiction of heavy drinking, intoxication, and significant consequences of drinking. A series of content analysis studies show that the frequency of portrayal of drinking acts in prime-time fictional programs steadily rose from about 5 per hour in the late 1970s to 10 per hour in the mid-1980s; depictions have declined to about 5 or 6 per hour in recent years.[16,25] Alcohol is more often portrayed as attractive than unattractive, although the majority of the depictions are judged to be neutral. Most of the motivations and outcomes associated with drinking are either positive or neutral, but television occasionally portrays deficit motivations for drinking (e.g., escape, tension relief, crisis management) and adverse consequences (e.g., status loss, health and safety risks, strained relationships, social disapproval). Almost all drinking-related portrayals involve clearly adult characters, most of whom possess positive attributes such as high social status; the authors conclude that the desire to drink is often presented in a manner that glamorizes alcohol as a symbol of adulthood.

Based on cultivation theory, preadolescents should perceive that drinking in society is more widespread as their level of exposure to television portrayals increases. Social learning theory would predict that youthful viewers acquire generally favorable stereotypes of drinkers, learn about a broad array of situations appropriate

for drinking, and gain knowledge about many positive and some negative consequences of drinking. Certain young people may display imitative drinking behavior after they vicariously experience the predominantly rewarding consequences of the modeled behavior; disinhibition of performing proscribed drinking acts may also occur. A more fundamental effect involves the overall attitudinal disposition resulting from the translation of cognitive inputs in the expectancy-value formulation; this influence should be in a positive direction, although some of the learned benefits of alcohol are offset by information gained about the drawbacks depicted in some scenes.

Two investigations have focused on entertainment effects on predrinkers. Kotch, Coulter and Lipsitz[19] conducted a laboratory experiment with 10–12 year olds. The stimulus tape featured a half-hour montage of scenes from a number of episodes of an unidentified television series that often depicts drinking; in 13 of the 32 scenes, characters drank alcohol in social or ceremonial contexts with positive or neutral consequences. The control tape substituted nondrinking scenes.

After viewing, children filled out a questionnaire measuring subjective expectations of the utility of drinking (45 questions about salience and probability of outcomes if they had a drink) and attitudinal approval of drinking patterns and situations (e.g., social relaxation, drinking in excess). No significant differences were found on the utility instrument, although boys exposed to the stimulus tape rated the good effects of alcohol as more important than the bad effects. Approval ratings tended to be higher in the experimental group, but not to a significant degree.

Another laboratory experiment tested the effect of drinking depictions in a television comedy on hypothetical drink-serving choices among children 8–11 years old.[22] Children in the experimental group were exposed to a brief segment of a *M.A.S.H.* episode with three scenes in which the lead characters held or mixed martinis; one control group saw the same segment with the drinking incidents edited out, and a second control group saw no programming. The subjects were then shown glasses identified by the experimenter as containing either whiskey or water and asked which they would serve to either adults or 8-year-old children in photographs. In the entertainment group, 74% of the adult stimulus pictures were offered whiskey; this is significantly higher than the average of 53% for the two control groups. There was no difference in type of drink offered to children; most served water.

The only study of teenagers involves primitive measurement of viewing and drinking by high school boys.[24] The survey found that heavy television viewers (>4 hours per day) consumed alcohol beverages an average of 5 days per month, compared with 3 drinking days per month for light viewers (<2 hours daily). This raw difference became larger when demographic variables were controlled, indicating that the relationship is functional, although the direction of causality is uncertain.

PUBLIC SERVICE CAMPAIGNS

Adolescents are seldom targeted by responsible drinking and drunk-driving campaigns in the mass media, because this age group is ostensibly too young to be consuming alcohol, even in a responsible manner. Yet campaign designers realize that it is almost fruitless to undertake campaigns telling mid-to-late teenagers to abstain. Thus, the main sources of influence are general-audience campaigns to promote moderation and to prevent drunk driving and campaigns aimed at preteens to prevent experimentation with alcohol; otherwise, only occasional television spots urge teens to avoid drinking (especially during prom season). Relatively little research has evaluated the effectiveness of alcohol campaigns with adolescents. This section describes one new investigation of television PSAs and briefly reviews the major campaign for preteens.

Atkin, DeJong and Wallack[10] measured the responses of teenagers and young adults to an array of recently produced television spots dealing with responsible drinking and drunk driving. A total of 18 messages were tested, including 9 ads sponsored by two leading beer companies (Anheuser Busch's "Know When to Say When" and Coor's "Now Not Now") and 9 PSAs sponsored by Mothers Against Drunk Driving (MADD), Technique of Effective Alcohol Management (TEAM), Department of Transportation (DOT)/Ad Council, and the television networks. This section focuses on the younger portion of the overall sample, which is composed of midwestern high school students 15–18 years old.

The survey instrument measured the amount of home viewing of alcohol-related PSAs (whether sponsored by nonindustry organizations or the beer industry). For comparison, the questionnaire also asked about viewing of commercial messages designed to sell various brands of beer. The high school students were asked, "In an average week, about how many public service messages do you see which tell drinkers to consume alcohol responsibly or to avoid driving after drinking? (these messages may be sponsored by the government, organizations such as MADD, or by alcohol companies)." A parallel question asked, "How many television commercials do you see for all brands of beer?"

Respondents reported seeing far more television beer commercials than PSAs. The median number of PSAs per week is 7.0 compared with 16.1 beer commercials. Thus, the typical respondent sees one PSA per day, compard with more than two beer commercials. Indeed, 40% report watching at least three commercials each day. Compared with young adults over age 18, teenagers are more highly exposed to both types of messages.

The primary research methodology used in this study is laboratory response testing, in which young people are shown a series of spots and asked to judge introspectively and then to self-report the degree of influence. This subjective impact technique is sensitive to the relatively small changes likely to result from a single exposure, but the viewers may not be aware of or willing to disclose changes in attitude and behavioral intentions resulting from message exposure.

The following subjective impact question was posed for each ad and PSA: "How effective is this message in influencing you to drink responsibly?" For the nine beer company ads, an average of 45% of the teenage sample reported that the ads are "very effective" or "fairly effective" in influencing them to drink in a responsible manner; an average of 57% reported that the nine nonindustry PSAs are effective (the reported impact is much higher for spots from the Ad Council and MADD than for spots from the networks or TEAM).

A parallel subjective impact question was asked only after the nonindustry PSAs that recommended designated drivers. An average of 63% of the teenagers reported that the ads are "very" or "fairly" effective in influencing them to arrange for a designated driver.

This study also examined young viewers' interpretations of the recommended drinking practices featured in the slogans in spots sponsored by both beer companies. The Anheuser-Busch verbal recommendation is to "know when to say when"; Coors visually depicts social settings in which their product is "the right beer now," intercut with risky situations (especially driving) that are labeled as "not now."

The "know when" slogan is quite vague, because it does not specify the point at which drinking should stop. On the surface, the Coors recommendation appears to be a more clearcut prohibition of drinking in the depicted risky situations. However, viewers may believe that "not now" refers only to excessive drinking or to performing the risky actions after consumption rather than to abstaining in risky situations.

Because of these ambiguities, a pair of questions attempted to ascertain audience interpretations of the meaning of the recommended behaviors. In each case, the question asked respondents who had seen a company's spots to write down the exact number of drinks that is appropriate to consume.

On the average, the "know when" slogan is interpreted by respondents as meaning that a typical adult should stop drinking after about 3.8 cans of beer; 42% believe that the cutoff point is at least 4 beers. Only 22% think that the "not now" situations mean no beers. The average is 3.1 cans of beer, and 32% say that Coors wants people to drink at least 4 beers.

In the late 1980s, the National Institute of Alcohol Abuse and Alcoholism (NIAAA) initiated a major campaign to prevent alcohol use among 8–12 year olds by increasing awareness of the risks of early drinking, demonstrating skills for resisting peer pressure, and establishing nonuse as an accepted social norm.[4] Designers developed a set of materials around the "Be Smart, Don't Start" theme, including television spots, a music video, posters, and an activity book. The televised messages were shown on Saturday morning, and the print materials were distributed through schools. Unfortunately, no summative research tracked the impact, but formative evaluation showed that viewers rated the music video as believable, understandable, and interesting and that teachers reported that the materials were well received by students.

ADDRESSING THE FUTURE ROLE OF ALCOHOL MESSAGES

This chapter has identified a number of problematic consequences of media advertising and entertainment messages dealing with alcohol and has shown that PSAs can have beneficial effects on adolescents. Various solutions for improving the situation include a mixture of regulations and voluntary modifications in the message environment and enhanced educational efforts to better prepare adolescents to process the messages that they encounter.

Prohibition of alcohol advertising has been a seductive option to reformers since cigarette commercials were banned in the early 1970s. The ban on alcohol advertising has been repeatedly advocated at a series of congressional hearings between 1976 and 1991 and has received support from leading medical and public health organizations and by experts advising the Surgeon General on drunk driving. Several opinion polls in recent years have found that about two-thirds of the general public favor a ban on beer and wine commercials.[7]

The primary advantage of totally banning broadcast ads for beer and wine is a decrease in advertising-induced use and abuse. Furthermore, prohibition of commercials would serve to stigmatize beer and wine products, just as cigarettes and distilled spirits have been singled out for special treatment; viewers would be sensitized to the serious nature of seemingly innocuous substances.

The magnitude of these benefits, however, is rather modest. Research evidence indicates that television advertising does not exert a sizable impact. Researchers have yet to demonstrate that radio advertising increases drinking, and no theoretical rationale justifies the expectation of meaningful effects beyond brand enhancement. Elimination of broadcast commercials would produce only a small improvement in drinking problems, and the stigma associated with the removal would fade over time as the mere absence of advertising becomes nearly invisible. Furthermore, more effective and less intrusive ways to achieve the underlying objectives include implementation of restrictions, countermessages, and disclaimers, along with other nonadvertising policy regulations.

Moreover, a ban may be counterproductive because several unintended consequences may undercut efforts to combat alcohol misuse. First, it is likely that the quantity and placement of responsible drinking and drunk-driving PSAs would be substantially diminished; networks and local stations would no longer feel any obligation to provide free time to tell the "other side" of alcohol-related issues. The aftermath of the ban on cigarette advertising in 1971 provides a clear lesson: when the commercials ceased, the antismoking PSAs almost disappeared, and the public no longer received the heavy dose of negative information about tobacco. Television production companies may also be less cooperative in altering inappropriate depictions of drinking or inserting positive portrayals such as designated driver themes. Alcohol companies would undoubtedly cut back on their sponsorship of television spots encouraging moderation and designated drivers (e.g., "Know When to Say When").

In addition, the alcohol companies would probably shift their broadcast budget into other types of advertising and promotion (print media, billboards, event sponsorship) that in fact may be more influential in targeting new and vulnerable audiences. Again, the history of the cigarette ban is instructive. The tobacco companies dramatically increased their spending on specialized magazine advertising and targeted segments of the population more precisely, particularly women. Even without messages on television, cigarette promoters have effectively reached children with the Joe Camel campaign in recent years.[20] Companies would be likely to channel more money into magazines, event sponsorship (sports, festivals, concerts, and cultural events), and product placements in films, television shows, and music videos.

The primary alternative to a ban involves restrictions on advertising, ranging from wholesale elimination of the pervasive lifestyle portrayals to more surgically precise excision of specific problematic practices. Broadcast advertising in some form would still be permitted, allowing alcohol companies to attain legitimate brand-switching and reinforcement goals and to exercise their First Amendment rights to commercial speech. Beyond content regulation, the other major alternative involves increases in prohealth and safety messages, including PSAs, direct counteradvertising, and insertion of disclaimers and positive role models in commercials. Some changes must be mandated by government, but others could be implemented through industry self-regulation.

Several recommendations from Surgeon General Koop's Drunk Driving Panel offer promising policy initiatives.[13] The first provision is a matching of the level of alcohol advertising with equivalent exposure for effective prohealth and safety messages to provide more complete and accurate information. This goal could be achieved through federally mandated placement of PSAs or government purchase of broadcast time. Although little evidence has assessed the impact of PSAs on young people, a larger number of prominently positioned persuasive messages has a clear potential to influence adolescent viewers.

Another pair of proposals narrowly focuses on two types of advertising appeals that are considered to be especially problematic for teenage drinkers. One proposal would eliminate the use of celebrities who have a strong appeal to youth in alcohol advertising and promotion, and the other would eliminate alcohol advertising and promotion that portray activities that can be dangerous when combined with alcohol. Some research evidence indicates that celebrity role models in alcohol ads are influential with youth,[9] but no studies have specifically investigated the impact of ads that depict risky activities such as driving, auto racing, snowmobiling, motorboating, swimming, skiing, and mountain climbing. Nevertheless, theoretic mechanisms derived from social cognitive learning, cultivation, and classic conditioning predict that televised associations between drinking and dangerous behaviors would contribute

to higher levels of alcohol consumption in hazardous contexts. This reform could be accomplished by voluntary self-regulation or regulation by the Bureau of Alcohol, Tobacco, and Firearms. (BATF) or the Federal Trade Commission (FTC).

In addition to eliminating dubious practices, social cognitive learning theory suggests that it would be beneficial if advertisers voluntarily inserted depictions of positive role modeling (e.g., drivers refusing drinks, companions intervening to discourage excessive drinking or prevent drunk driving) in some of the television commercials.

A final pertinent recommendation is to require clear and conspicuous warning labels in all alcohol advertising. Several bills have been recently introduced in Congress to force advertisers to disclose key harmful effects of alcohol in broadcast commercials. Although container warnings have not achieved appreciable changes in drinking practices, the potential for meaningful impact is more promising for carefully designed and prominently displayed advertising disclaimers. Based on conventional learning theory, these verbal warning messages should influence audience beliefs about the negative consequences of misuse and translate into more responsible attitudes and drinking practices.

Adolescent learning of advertising-induced images can be partially undermined by countermessages that sensitize and inoculate the audience against the enticing commercial appeals. Instructional units and televised informational spots in media literacy can inculcate a more critical processing of ads by demonstrating that certain features are misleading (e.g., not everyone drinks, not all consequences are positive), by demystifying the persuasive devices and revealing the manipulative intent of advertisers, and by parodying the themes and styles of ads.

In entertainment portrayals, the pervasiveness of drinking is probably a less critical issue than the mixture of motivations and consequences. Whether teens see 100 or 200 drinking acts per week may not make much difference, but the ratio of positive vs. negative depictions can significantly determine the attitudinal and behavioral outcomes. The most promising approach is to alter television content by downplaying deficit motives (e.g., drinking as a coping mechanism) and more realistically representing the incidence of harmful outcomes (e.g., health risks, social disapproval), especially for excessive consumption. Increased modeling of certain responsible behaviors would also be effective (e.g., declining drinks, choosing nonalcoholic beverages, discontinuing before intoxication, seeking treatment for dependency, and intervening to prevent drunkenness or drunk driving). Some progress in this direction has been achieved through the process of cooperative consultation with writers and directors in the television industry. The most notable program has been the efforts by the Harvard Alcohol Project to encourage the Hollywood creative community to depict the designated driver concept in prime-time entertainment programming. Although this effort has resulted in dozens of verbal references and several lengthly plotlines illustrating the practice of designating a driver who will consume little or no alcohol at a social occasion, questions can be raised about the appropriateness of this role modeling for teenagers. Not only is it against the law for underage persons to drink, but a designated driver may also disinhibit companions who are confident of a safe ride and thus increase consumption. To date, no evidence indicates the impact of the Harvard Alcohol Project on the knowledge, attitudes, or behavior of teenage audiences.

PSAs targeted specifically at teenage audiences should be increased. Although some drunk-driving PSAs are aimed at young drivers (e.g., the NIAAA campaigns, Friends Don't Let Friends Drive Drunk and Drunk Driving Can Kill a Friendship; local graduation campaigns; and the Stevie Wonder video and spots), few messages

advocate abstinence or even moderation in drinking. Major teen-oriented campaigns similar to the recent preadolescent antidrinking campaign (NIAAA's Be Smart Don't Start video and spots) would help to combat the more fundamental problem of excessive party drinking among high school students. Substance abuse campaigns tend to have limited effectiveness with youth because of resistant predispositions; supplemental messages encouraging parents to prevent teen drinking opportunities are also necessary.

Parents can play a significant role in modifying the impact of television messages. One approach is to discourage viewing of entertainment series that glamorize drinking, especially by younger adolescents. A more promising strategy is for parents to educate teenagers about the advertising and entertainment depictions at times when they are jointly exposed; parents can help rehape the interpretations of young viewers by explaining how prodrinking portrayals are not an accurate reflection of reality, by highlighting negative consequences of misuse, and by expressing disapproval of inappropriate drinking patterns. Finally, parents can seek to verbally reinforce the prevention themes of PSAs that are coviewed.

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Television, Obesity, and Eating Disorders

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If the Nielsen ratings are to be believed,[13] children in the United States spend more time annually watching television than they spend in any other activity except sleep. Both television time and content can be linked to a variety of adverse health effects. This chapter examines the relationship of television viewing to the onset or persistence of obesity and the mechanisms whereby television viewing can cause obesity. Although no evidence yet links television viewing with eating disorders, a logical case can be made that the images of women portrayed on television may predispose girls in the United States to eating disorders by the promotion of somatotypes that are rarely achieved. Each of these issues is considered in turn.

EFFECTS OF TELEVISION ON THE PREVALENCE OF OBESITY

In two nationally representative surveys conducted in the early 1960s, Dietz and Gortmaker found that the prevalence of obesity was directly and significantly related to the amount of time spent viewing television among children aged 6–11 years and among adolescents aged 12–17 years.[12] In both groups of subjects, the effects of television viewing persisted after the introduction of controls known to affect the prevalence of obesity, such as region, season, population density, socioeconomic class, and time spent in reading, in listening to music, or with friends. Although the correlations were small, a significant dose-response effect could be demonstrated in each population; the more time a child spent watching television, the higher the likelihood that the child was obese.

To exclude the possibility that children watched more television because they were obese, the

survey examined the effect of television time on children who were not obese at baseline, but who became obese at follow-up. Among this group, television viewing was the most powerful predictor of subsequent obesity.

The relationships between television viewing and obesity were subsequently confirmed in two other nationally representative surveys: the National Longitudinal Survey of Youth, which followed over 17,000 adolescents into adulthood,[27] and the National Survey of Fitness and Youth.[28] Television viewing has also been associated with obesity among local samples of sixth graders[33] and adult men[3,40] and women.[3,39]

At least one smaller survey of adolescent girls in a northern California school system has failed to demonstrate an association between television viewing and obesity.[30] The authors argued that the low-order correlations observed in the study by Dietz and Gortmaker[12] reflected the size of the sample and that the results were not clinically significant. Alhough Dietz and Gortmaker observed no significant correlation between television viewing and the degree of adiposity in their clinic population,[8] the absence of a clinically demonstrable effect does not diminish the public health implications of the relationships observed in the larger population.

MECHANISMS THAT LINK TELEVISION VIEWING WITH OBESITY

The Role of Inactivity

Several lines of evidence suggest that both inactivity and activity may independently affect the prevalence of obesity.[17] In the United States, television viewing constitutes the principal source of inactivity.

In the National Children and Youth Fitness Survey,[28] parents' and teachers' ratings of a child's activity level and television time appeared to have independent effects on the prevalence of obesity. Increased activity was inversely associated, whereas television viewing was directly and independently associated with the prevelance of obesity.[16] These relationships persisted after the introduction of controls for age, gender, levels of parental activity, parental exercise with child, or time spent in physical education classes or recess in school. In a second study, the effect of activity and television viewing on the two-year incidence of obesity was examined in adult men in the Health Professionals Follow-up Study.[3] Logistic regression indicated that a vigorous level of activity and weekly television viewing independently affected the two-year incidence of obesity. Increases in vigorous activity of 1–4 hours per week had approximately the same effect on obesity as decreases in television viewing of 1–3 hours per day.

Effects of Television on Energy Balance

Obesity is caused by an energy intake in excess of energy expenditure. The excess energy is stored as fat. Television viewing affects both energy intake and energy expenditure.

Energy Intake. Food products or fast-food restaurants are the most heavily advertised products on children's television[1,29a] and constitute approximately 35% of the commericals on prime-time television. In addition, reference to food or food consumption occurs between three and five times per half hour of prime-time programming.[15,36,41] The majority of the food is eaten by the characters between meals,[15,36] and sweets account for 40% of all snacks.[15,36,41] These rates have not changed substantially in over 10 years.[15,36,41]

In view of the frequency with which food is discussed, consumed, or advertised on television, it is hardly surprising that parental food purchases, children's attempts to influence parental food purchases, children's snack choices, the frequency with

which children snack while viewing television, and children's total caloric intake[4,14,37] are directly related to the time that they spend viewing television. Furthermore, the frequency with which parents purchase products for their children directly parallels the frequency with which the products are advertised on television.[4,14,37]

No studies to date have linked adolescent television viewing with the consumption of foods advertised on television. However, because adolescents are more autonomous and have a greater purchasing power than children, the strength of the linkages between television viewing and the consumption of advertised foods probably increases as children become older. For example, increased television viewing by a group of children and adolescents was associated with a variety of potentially adverse dietary practices, such as a tendency to consume higher-fat food products.[43]

Energy Expenditure. The effects of television on energy expenditure have not been carefully explored, principally because measurement of all the components of energy expenditure is difficult and expensive. Nonetheless, several different studies have examined the effect of television viewing on metabolic rate and on maximal oxygen consumption.

Two studies have examined the effect of television viewing on metabolic rate with contradictory results. The first compared compared metabolic rates in preadolescent girls while they sat quietly or while they watched television. In both obese and nonobese girls, metabolic rate was significantly reduced to comparable levels when the girls were watching televison.[24]

Dietz et al. recently completed a similar study that compared metabolic rate in obese and nonobese girls while they watched television, sat quietly, or read a book.[9] Compared with the nonobese girls, obese girls had increased metabolic rates under all three conditions. However, metabolic rate was similar under all three conditions within the obese and nonobese groups. Furthermore, although body movement was observed more frequently among nonobese girls when they sat quietly, movement under all three conditions appeared to affect the minute-to-minute variability but not the mean of metabolic rate. These data suggest that metabolic rate was not lower among girls when they watched television compared with other sedentary activities. Furthermore, although significant differences were observed in movement, the differences did not appear to affect metabolic rate. Whether the discrepancies between these two studies were attributable to measurement errors or differences in the television program selected for viewing remains unclear.

Several sources of data suggest that television viewing may have an adverse effect on physical fitness. Both the capacity to perform exercise as well as measurements of maximal oxygen consumption (VO_2 max) have been examined. Although VO_2 max is widely equated with fitness, body size and muscle-fiber type account for most of the variance in this measurement. Nonetheless, after such effects are controlled, the quantity of vigorous or sedentary activity may exert an additional effect.

In an early study,[38] adolescent boys who were classified as heavy viewers (>4 hours of television per day) were compared with moderate (2–4 hours per day) and light (<2 hours per day) viewers. Television viewing was not related to the prevalence of obesity. However, light viewers scored significantly better on a global measure of fitness and could perform significantly more pull-ups, push-ups, sit-ups, and sidesteps than heavy viewers. Moderate viewers achieved intermediate scores.

Dietz et al.[10] studied VO_2 max during a graded treadmill exercise in 65 nonobese preadolescent girls. After controlling for body size, VO_2 max was inversely related to time spent viewing television.

The mechanism whereby television viewing can reduce fitness is suggested by a variety of studies. Children and adolescents who watch more than 4 hours of television

daily report less activity than children who watch less television.[43] After-school television viewing has been inversely related to the level of physical activity, even after control for age, race, sexual maturity, adjusted BMI, and level of parental education.[30] Finally, studies of a town in Canada after the introduction of television indicated that television appeared to displace participation in vigorous physical activities.[42]

These data suggest that television affects fitness by reducing participation in vigorous activities necessary to produce cardiovascular fitness or strength. They also suggest that the effects of television viewing on fitness do not result from the association of television viewing with obesity.

EFFECTS OF VIDEO GAMES ON ENERGY EXPENDITURE

Despite the impression that adolescents spend substantial amounts of time playing video games, only limited information is available to confirm that impression, and the effects of video games on energy expenditure have rarely been examined.

In 1986, one of the few studies to examine the broad effects of video games on other activities[5] found that new owners played video games an average of 15 hours per week, whereas subjects who owned games before the study began played video games approximately 10 hours per week. The acquisition of a video game appeared to reduce time spent watching television by 1 hour per day, but outdoor play time was unaffected.

Although the two forms of sedentary activity have not been directly compared, video games also appear to require more energy than television viewing. For example, playing Ms. Pacman requires almost twice as much energy as standing quietly in front of the video game without playing.[32]

No studies have examined the relationship of video games to obesity. Nonetheless, the increases in energy expenditure over resting metabolic rate associated with playing video games and the absence of cues that promote food intake suggest that an association of video games with obesity is unlikely.

TELEVISION AND EATING DISORDERS

Beginning in late childhood, girls become increasingly preoccupied with weight and appearance. Approximately 30% of third-grade boys and girls have tried to lose weight.[25] Although this frequency remains constant among boys throughout elementary school, by sixth grade almost 60% of girls have tried to lose weight.[25] Thirty-five to 60% of adolescent girls are dissatisfied with their weight or consider themselves overweight,[2,7,26] although the weights of the majority of this group may be in the normal range.[26] The prevalence of chronic dieting increased from approximately 8% among seventh and eighth graders to 14% among high school seniors.[35] As with weight dissatisfaction, the majority of chronic dieters had self-reported weights for height within the normal range.[35] Purging behaviors that may precede bulimia occur in approximately 10% of 10th graders,[22] and frank bulimia ranges from 1–13%.[18,20,23,29,31] The frequency of anorexia is probably less than 1%.[6,19]

Few studies have characterized the origins of the excessive concern with fatness that currently exists. The negative images of obesity that occur early in childhood[34] clearly reflect the connotations that society attaches to obesity. Therefore, the anxiety about weight and diet is an appropriate response to prevalent social messages. The images of life on television only add to the stereotypes of obesity that already exist within the population and reinforce the prevalent cultural values regarding the ideal female soma type.

Although the norms may be gradually changing, few of the principal characters on television are overweight. The majority of the overweight characters are men[15] or African American women.[21] Children and adolescents are rarely overweight.[15,21] Furthermore, fat jokes appear to occur as often on television as in other media. Therefore, the absence of overweight individuals on television, despite the frequent references to food in programming and commercials, implicitly promotes the conclusion that neither frequent snacking nor the consumption of food advertised on television is related to obesity. Furthermore, the values attached to the slim and beautiful create for many an unattainable ideal. Although a convincing case cannot be made that television contributes to eating disorders, it can be safely argued that television perpetuates the ideal somatotype and the stereotyping of the obese that already exist.

SUMMARY

Despite the association of television viewing with obesity, the methodology for measurements of energy intake and expenditure are not sufficiently sensitive to demonstrate that either the consumption of food advertised on television or the reduction in activity associated with television viewing is sufficient to generate obesity. Nonetheless, given the prevalence of obesity, its long-term consequences, and the benign effects of a reduction in television viewing, even a circumstantial argument that links television viewing to obesity is compelling enough to support recommendations for limiting the quantity of television time.

Obesity can be explained by a relatively small caloric imbalance that occurs over time. For example, the excess consumption of 50 Kcal/day can account for a gain in excess fat of 5 pounds per year. In this context, even small potential effects of television viewing on energy intake or expenditure acquire significance. In general, the foods advertised on television tend to be high-caloric density foods. For example, the cereals with added sucrose that are so heavily advertised on children's television contain significantly more calories per serving than their unsugared counterparts.[11] Likewise, the substitution of television viewing for moderate activity might be expected to account for a 50 Kcal/day caloric imbalance. Therefore, despite the absence of clear evidence that television accounts for the caloric imbalance necessary to produce obesity, the likelihood of reduced activity and increased caloric intake associated with television viewing suggests reasonable mechanisms whereby television viewing could cause obesity. The logic of this argument also suggests that attempts to control television time may be the lesst invasive approach to prevent obesity or, in appropriate cases, to treat it.

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Sex Roles and Stereotyping on Television

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Television is the central and most pervasive mass medium in American culture. Over the years it has come to play a distinctive and historically unprecedented role as the nation's most common, constant, and vivid learning environment. Few people escape exposure to television's recurrent images. Moreover, newer delivery systems, such as cable and video cassette recorders, provide even more opportunities for viewing.

In the United States, and increasingly around the world, people spend much of their leisure time in the world of television. Each day the average American watches more than 3 hours of television, and the set in the average home is turned on for just under 7 hours.[1] Children and older adults watch the most, whereas adolescents watch the least; but even teenagers spend about 20 hours each week with televison. The nation's youth spend more time watching television than they spend in school or doing homework; only sleep consumes more of their time. In short, by the time the average person reaches the age of 65, she or he will have spent 9 full years of life watching television.[18]

Television is a synthetic world in which every character, prop, theme, locale, and action are manufactured to attract the largest number of viewers at the least possible cost. The world of television is ruled by the principle of cost per thousand; that is, how much it costs to attract a thousand viewers. Moreover, not every viewer counts the same; the primary goal for network stations during prime time is to attract viewers between 18 and 49 years of age, because they are in the prime earning and spending years. Cable channels also are programmed to appeal to certain segments of the audience; Nickelodeon and the Disney channel, for example, are geared to youngsters, whereas the

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movie channels (e.g., Home Box Office) present programming that appeals to viewers between 18 and 49 years old.

Television has become the nation's storyteller; it tells most of the stories to most of the people most of the time. The critical point about television, however, is that for the first time in human history the bulk of the stories transmitting the nation's culture are written and are told by a commercial institution rather than by parents, churches, or schools. The stories are both fact (news and information programs) and fiction (entertainment programs); television describes life—people, places, striving, power, and fate. It shows and tells how things work and what to do about them; it presents the good and the bad, the happy and the sad, the successful and the failures. Television tells us who is on top and who is on bottom, who wins and who loses. Characters do not live or die but are created or destroyed to tell the story. The storytelling function of television is of extreme importance because it is one of the ways in which viewers learn about the world and its peoples.

The impact of the mass media, particularly television, has been a longstanding concern of scholars, the medical community, and the general public. The Payne Fund studies[12] examined the role of the movies in children's lives (who went, what they saw, what they learned) during the early days of motion pictures. The potentially harmful effects of comic books was a concern in the 50s.[83] During the past 25 years, the relationship between television viewing and violence has been the focus of hundreds, if not thousands, of studies.[3,28,49,75]

Socialization, especially in regard to gender roles, has been a focus of scholars in numerous disciplines, including sociology, psychology, social psychology, anthropology, and communication. The term has a slightly different connotation, as one would expect, in each discipline. Psychologists may look at socialization as a form of personal learning, development, or adjustment. Sociologists, on the other hand, use the term to refer to the social processes by which an individual is introduced to the society's or group's culture, whereas anthropologists see socialization as enculturation.

These definitions share the notion that socialization is the way that people learn about their culture and acquire some of its values, beliefs, perspectives, and social norms. In short, socialization is the way in which an individual comes to adopt the behavior and values of a group. Socialization is an ongoing process; we are socialized and resocialized throughout the life cycle.

Traditionally, parents, peers, schools, and churches have had the major responsibility for socialization. Today the mass media—and particularly television, through its storytelling function—have joined the ranks of socializing agents. Over the past 25 years numerous studies have revealed that television and the mass media in general play a crucial role in the socialization of both children and adults.[4,57,58]

Media socialization, however, is different from socialization by more traditional agents. Media socialization typically involves observational or social learning. It does not permit face-to-face social interaction and so may lack some of the seductive or coercive powers of interpersonal communication that traditional agents have at their disposal.[85] Nevertheless, through richness of imagery and storytelling, the media have their own brand of seductiveness. In short, whereas people may be able to withstand attempts at socialization by more traditional agents, they may not be aware of how the media, particularly television, influence and shape their views about the world.

Because it is an ongoing and everyday activity, television is an especially important agent of socialization for young people. It requires only minimal skills of understanding, and its visual nature makes it particularly appealing to young and old alike. It may play a central role in a young person's social life, providing the fuel for conversations and peer-group cohesiveness. Finally, television series have relatively

long lives. Many programs, once they have completed their first run on a network, go into syndication and are shown, again and again, on independent stations, on cable systems, or in other countries. Consequently, media images cannot be viewed as one-time occurrences with possible effects limited to one-shot viewing experiences.

A number of factors, including the overabundance and endurance of stereotypic and traditional images of men and women in television programming,[67] have contributed to particular concern about the role of television in gender-role socialization.

GENDER-ROLE IMAGES ON TELEVISION

Beginning with the earliest analyses of television programming,[27] study after study has found that men outnumber women by two or three to one in prime-time dramatic programming.[13,61,67] Over the past 25 years the basic inequity in representation has continued, even though network dramatic programming has shown a statistically significant increase in the number of female characters (and a resultant statistically significant decrease in the number of male characters).[66]

Specific sterotypic representations of men and women are found on television. Numerous analyses have shown that women are likely to be younger than men[25,78] and tend to be cast in traditional and stereotypic roles. Women, for example, are more attractive and more nurturing and are presented in the context of romantic interests, home, and/or family. They are also less likely to be involved in violence; if involved, they are more likely to be victimized.[66] Women are more likely than men to be married, although most of the characters in prime time are single or their marital status cannot be ascertained.[69] On the other hand, men on televison are older. They tend to be more powerful and more likely to be involved in violence. In addition, proportionately fewer men are presented as married.

Attractiveness is an important component of characterizations, and body types as presented on television are highly stereotypic. Most female characters are thin; Silverstein, Perdue, Peterson, and Kelly[72] found that 7 of 10 women, compared with less than 2 of 10 men, were rated as thin. On the other hand, only 1 of 20 women was rated as heavy compared with 1 of 4 men. Similarly, Kaufman[32] found that half of the characters in her sample of television programs and commercials were rated as thin or average, whereas 15% of the men and 8% of the women were overweight. Finally, women on television are more likely to have blond or red/auburn than black or brown hair.[13]

Occupational portrayals on television, although varied, are also stereotyped. Significantly more men than women are employed outside the home, usually in highly prestigious, better-paying, and traditionally masculine occupations such as doctors, lawyers, and law enforcers. Women employed outside the home usually are cast in traditional female occupations, such as nurses, secretaries, waitresses, and sometimes teachers.[68,73] Compared with men, women in the workplace of television are less likely to be presented as decision-makers or as economically productive workers; in the past 30 years relatively little has changed in the presentation of working women.[77]

Occupational and family-role portrayals are often at odds on televison. About three-fourths of married male characters are employed, and one-fourth are either not working or their employment status is unknown. Among women the pattern is reversed: only 3 of 10 married female characters are also employed, a proportion quite different from the real world, in which more than half of all married women are employed. Television also fails to recognize adequately that women can successfully mix marriage, homemaking, and raising children with careers.[69] Nor does the world

of television adequately acknowledge the importance of homemaking and raising children; as in the real world, the woman who stays home has less status than the woman who has a career.

CHILDREN'S PROGRAMMING, COMMERCIALS, THE SOAPS, AND MUSIC TV

Women are especially short-changed and underrepresented on children's programs. Studies of cartoons consistently reveal that male characters outnumber female characters by 4 or 5 to 1[65,68] and that women are presented in stereotypic roles.[34,74] Sex-role portrayals do not differ in programs that are toy-based compared with those that are not toy-based.[21] Public television programs for children, although better in some dimensions, still fall short in regard to basic demography.[15,36] Nor do men fare well in children's programming; they are more likely to rely on aggression and to receive disapproval.[47]

Like children's programs, commercials are also sex-typed and stereotyped[11] with strong links between attractiveness and women.[20] Research conducted over the past 25 years has revealed that a woman's voice is rarely used as a voiceover and that men are presented as authoritative, even for products used primarily by women.[6,16,35,48] Although men and women are more equally represented (in terms of numbers) in prime-time commercials, women are considerably underrepresented in commercials aired during children's programs.[17,56] Sex-typing in children's commercials also exists at the structural level with male-oriented commercials containing more cuts, louder music, and more boisterous activity, whereas female-oriented commercials contain more fades/dissolves, softer music, and quieter play.[82]

Women in daytime serial dramas (soaps) generally have parity with the men and are presented at times as equal[10,31] and often in positive terms.[19] The overall impression, however, is that the traditional woman has a somewhat easier life and is seen in a more positive light; she often triumphs, whereas the liberated or modern woman is punished or has a harder time.[8]

In the past 10 years music videos have become an important television genre for youngsters, particularly adolescents. Women, however, are significantly underrepresented in videos,[7,9] and stereotyped sex-roles abound.[79,80] Sherman and Dominick[62] found that women were presented as submissive, passive, physically attractive, and sensual and often served as decorative objects, particularly in concept videos. Men, on the other hand, were in control of relationships. Other male images in videos include gang members, thugs, and gangsters, whereas female images include nightclub performers, temptresses, servants, and goddesses.[2]

Improvement in the presentation of women on television over the past 25 years, however, cannot be ignored. First, the proportion of women has increased from one-fourth to a little more than one-third of all characters—a statistically significant, if small, increase.[66] Nevertheless, the number of female characters depends on program genre. Women make up at least half of the characters in situation comedies and soap operas, but are particularly invisible in action-adventure programs.[73] Secondly, women's occupational roles have improved; more women are presented in typically male occupations. Women, however, are likely to be portrayed as affluent and rarely have problems with child care, harassment, or sex discrimination.[28]

Consequently, although we cannot say that liberated or nontraditional women do not appear on television, these images do not appear consistently. Most people can easily cite five, six, or more examples of women who are not stereotyped, and most of the research examining nonstereotyped roles has focused on a small number of

programs.[53] Thus, it is easy to forget that the majority of female characters in prime time are found in more traditional roles.

IMPACT OF GENDER-ROLE IMAGES

The description of television images is an important and necessary first step in understanding the role of television in society. Clearly, one cannot assess effects without knowing what people see. Consequently, as awareness of the images of men and women on television and in other media increased, research turned to examining the impact of these images. Studies have focused on a number of specific areas, including people's (and particularly children's) perceptions of sex-typed behaviors and occupational roles and/or their identification with certain types of characters. In addition, research has focused on the cultivation of gender-role attitudes in adults and children.

The perception of gender-typed behaviors examines the degree to which viewers, especially children, are aware of gender-typed or stereotyped behaviors in characterizations. This line of research reveals that viewers, particularly children, perceive stereotyped images. For example, in a sample of adult viewers in Israel, Zemach and Cohen[87] found that traditional family roles as well as feminine traits and masculine occupations were perceived as prevalent in television programming. Children also perceive that television characters exhibit stereotypic and gender-typed behaviors[37,54,55] in addition to stereotyped occupational images.[14,30,86]

Children identify with television characters, particularly those of the same sex. McArthur and Eisen[38] found that preschool children were more likely to recall and to reproduce the activities of a same-sex model even when the exhibited behavior was "sex-inappropriate." In addition, children are likely to nominate television characters as someone they would like to resemble when they grow up.[40] Boys rarely if ever nominate a female model, whereas girls are quite likely to choose a male model.

CULTIVATION OF GENDER-ROLE IMAGES

One particularly important area of investigation is the cultivation of gender-role attitudes in both adults and children. This research is an outgrowth of cultivation theory and analysis, which, in their simplest form, attempt to ascertain if frequent viewers of television are more likely to perceive the world in ways that reflect its dominant, stable, and recurrent imagery.[24,71]

This research differs from research relating to perceptions of gender roles (stereotyping) in programming and identification with specific characters because it examines how the media may shape people's, and especially children's, views of what it means to be a man or a woman. This shaping, in turn, may aid or abet the goals (occupational, educational, personal) that an individual sets out to achieve. Much of this research has used the methodology of surveys, although a number of studies have been conducted in an experimental setting. A large portion of research has studied samples of children and adolescents.

From a methodologic standpoint, studies of television's impact are hampered because it is almost impossible to find control groups who are not exposed to television. Nonviewers tend to be a small but quite eclectic group,[29] whereas the pervasiveness of television and the overall similarity of its imagery have resulted in an erosion of regional diversity.[42]

Research in cultivation has consistently revealed a relationship between television viewing and stereotypic conceptions about gender roles. In a study of 3- to

6-year-old children, Beuf[5] found that children who watched more television were more likely to stereotype occupational roles. Pingree[50] found that television commercials influenced children's attitudes about gender-role stereotypes. In a panel study of 250 eighth-, ninth-, and tenth-grade children, Gross and Jeffries-Fox[26] found that television viewing was related to sexist responses to questions about the nature of men and women and how they are treated by society. Similarly, Rothschild[60] found that third- and fifth-grade children who watched more television were more likely to exhibit traditional sex-role stereotypes for gender-related qualities (independence, warmth) and activities (playing sports or cooking).

Similarly, in a study of children in kindergarten through sixth grade, Freuh and McGhee[22] found that children who spent more time watching television exhibited greater sex-typing than those who spent less time watching television. In a later analysis, McGhee and Freuh[39] found that heavy viewers had more stereotyped perceptions of gender roles than light viewers. This analysis revealed an interactional effect: among light viewers the perception of male stereotypes declined with age, whereas among heavy viewers male stereotypes remained with increasing age. No interactional effect for the perception of female stereotypes was observed.

The potential effects of television's stereotyped occupational portrayals has also been examined. Wroblewski and Huston[66] found that fifth- and sixth-grade children knew about jobs that they typically encountered on television as well as experienced in real life. Occupations on television, however, were seen as more sex-stereotyped than jobs in real life. The children had more negative attitudes about men who hold television's typically feminine jobs than about men who hold jobs that women typically hold in real life. The girls in this sample were particularly positive about television's typically masculine jobs.

Studies by Morgan[41,42] and Morgan and Rothschild[45] revealed that television cultivates sex-role attitudes among adolescents, whereas Morgan and Harr-Mazar[44] found that television seems to cultivate attitudes about when to form a family and how many children to have. Morgan and Rothschild[45] also found that children who watch more television are more likely to endorse traditional divisions of labor between the sexes.

In a 3-year panel study of sixth- through eighth-grade children, Morgan[41] found that levels of sexism were higher among all boys and lower-class girls and that television cultivates notions such as women are happiest at home raising children and men are born with more ambition than women. Among girls, amount of television viewing was significantly associated with scores on an index of sex-role stereotypes 1 year later, over and above the influence of demographics and earlier scores on this same index; no evidence suggests that sex-role stereotyping leads to more television viewing. For boys, the patterns were reversed: no relationship was found between viewing and sex-role attitudes, but greater sexism was related to more viewing 1 year later. Overall, the study reveals that television viewing is most likely to make a difference among viewers who are otherwise least likely to hold traditional views of gender roles, a concept to which cultivation theory refers as mainstreaming.

In a second study of 287 adolescents using measures taken at two points in time, Morgan[42] found that television viewing made an independent contribution to adolescents' sex-role attitudes over time but was not related to certain specific behaviors in relation to seven specific chores. In a cross-sectional replication and extension of this research with a sample of children in the fourth and fifth grades, Signorielli and Lears[70] also found statistically significant relationships between viewing and sex-typed attitudes toward chores but no relationship between viewing and actual performance of sex-typed chores. Moreover, this study revealed that

attitudes toward sex-typed chores and actual performance of girl- or boy-chores were related but sex-specific. Children, particularly those who said they watched more television and who had more stereotyped ideas about who should do which chores, were more likely to perform chores traditionally associated with their gender.

Signorielli[63,64] found a relationship between television viewing and conceptions about male and female roles in two studies that analyzed data from the 1985 Monitoring the Future Survey. One of these analyses[64] found that children's conceptions about marriage reflected the ambivalent presentation of marriage in prime-time network programming. Television viewing was positively related to the number of high school students who said that they probably would marry, have children, and stay married to the same person. At the same time, television viewing was positively related to the opinion that, because one sees so few good or happy marriages, marriage as a way of life could be questioned. In a second analysis of these data,[63] conceptions about work reflected the two contradictory views that appear on television. Television viewing was related to adolescents' desires for (1) high-status jobs that would give them a chance to earn a lot of money and (2) jobs that were relatively easy with long vacations and time to perform other activities.

Only a few studies examine the relationship between conceptions about gender roles and television viewing among adults. Among a small sample of women in Madison, Wisconsin, Pingree et al.[79] found a positive relationship between viewing daytime serial dramas and supporting traditional family values and structures. In a study of registered voters in a southwestern city, Volgy and Schwartz[81] found a positive relationship between viewing entertainment programs and acceptance of traditional gender roles. In a sample of 78 college students and a group of 19 older adults, Ross, Anderson, and Wisocki[59] found that the amount of sex-role stereotyping in self-descriptions was positively correlated with amount of viewing of stereotyped television programs.

Finally, in an analysis of the National Opinion Research Center's General Social Surveys between 1975 and 1986, Signorielli[66] found support for a general hypothesis that respondents who watch more television have more sexist views and a mainstreaming hypothesis that certain groups of respondents who espouse significantly different views when they are light viewers will have more traditional outlooks in regard to woman's role in society as heavy viewers. This analysis found that in spite of a decrease in the number of respondents who agreed with sexist statements between the 1970s and 1980s, television viewing was related to the maintenance of notions of more limited roles for women in society, particularly in regard to politically oriented issues.

Further evidence for the cultivation perspective comes from a number of experiments, conducted both in the laboratory and in the field. In a laboratory experiment designed to ascertain the effects of exposure to beauty commercials, Tan[76] found that high school girls exposed to beauty commercials rated beauty characteristics significantly more important for popularity with men than girls who saw neutral commercials. The girls who saw the beauty commercials also rated beauty as personally more important than girls who saw neutral commercials. Geis, Brown, Walstedt, and Porter[23] found that women who viewed traditionally sex-typed commercials, compared with men and women who saw reversed role commercials, emphasized homemaking rather than achievement in an essay imagining what their lives would be like in 10 years. Finally, Myers and Biocca[46] found changes in young women's perceptions of body shape: women who were exposed to advertising that stressed body images said that they felt thinner than they ordinarily did. In short, exposure to a half-hour of television programming altered young women's perceptions of the shape of their bodies.

Finally, one of the rare studies with natural control groups of children who had little, if any, exposure to television[64] revealed changes in conceptions about gender roles after television became available. Girls who lived in a town without television (NOTEL) and girls who lived in a town with limited television (UNITEL) had weaker gender-typed views than girls who lived in a town with greater television availability (MULTITEL). Two years after the introduction of television into NOTEL and an increase of availability in UNITEL, the girls in NOTEL had become significantly more sex-typed; furthermore, the views of girls in both groups were similar to the views of the girls in MULTITEL. Similar results were found for boys in the same towns, except for anomalous high scores for the UNITEL boys in the first phase of the study.[33]

CONCLUSION

Research on the presentation of gender roles on television reveals stable, traditional images that, in most cases, are quite supportive of the status quo, especially in relation to physical appearance, marriage, power, and occupational roles. Research on the effects of such images on viewers indicates a relationship between television viewing and more stereotypic conceptions about gender roles.

In essence, television may be contributing to the maintenance of notions of more traditional roles for men and women in society. The images of women and men on television have undergone some change during the past two decades; society, on the other hand, has undergone numerous changes, and, although inequities are still found, many improvements have occurred. Both men and women know that attitudes relating to gender roles in society are different. How much greater, however, would these changes be if television were truly reflective of the status and role of women in the United States?

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Pornography's Impact on Male Adolescents

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Some male adolescents in American society may be harmed by exposure to pornography. Unfortunately, little social scientific research directly addresses this issue, partly because of the severe ethical and political constraints on researchers who might attempt to conduct experiments. (For example, an ethics committee is unlikely to approve an experiment in which the researcher exposed adolescents to pornography.) Therefore, the discussion below is organized around several interrelated questions and propositions that provide tentative conclusions based largely on inferences from related theory and research. This chapter, however, does not consider other potential effects of pornography exposure, including those considered beneficial by some,[63] but focuses exclusively on the hypothesis of possible harmful effects. The effects of pornography on female adolescents[16] are also not discussed in this chapter.

HOW IS PORNOGRAPHY DEFINED?

Supreme Court Justice Potter Stewart intoned that although pornography may be difficult to define, he "knew it when he saw it." This famous statement highlights the difficulties of definition. Linz and Malamuth[36] note that the various definitions typically imply beliefs about what pornography does or does not do. For example, a definition based on an appeal to a prurient (morbid, unhealthy, shameful) interest in sex, as used in many decisions of American courts, reveals a belief that media materials designed primarily to arouse the viewer sexually or to produce lust undermine certain Judeo-Christian values and institutions. In contrast, a definition that includes the concept of "violence and degradation of women"[55] reveals a belief that such media can hurt women's rights.

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As used here, pornography refers, with no pejorative connotation necessarily intended, **to sexually explicit media designed primarily to arouse the audience sexually.** Although prime-time television contains considerable sexual content,[56] the above definition is useful in distinguishing such media from those where the primary focus is sexual explicitness.

The materials used or discussed by researchers in the relevant literature can be divided into five categories, although not all would necessarily be considered pornographic by the definition above.[19] These stimuli have been presented to research subjects in the form of written stories, audio depictions, magazine pictures, slide presentations, or films. Four of these categories are relevant to the current focus. **Violent pornography**, which usually depicts sexual coercion in a sexually explicit context, has been defined operationally as a man's use of force against a woman in order to obtain sexual gratification (e.g., scenes of rape and other forms of violent sexual assault). A common feature of these depictions is the portrayal of what researchers have termed "positive victim outcomes"; that is, rape is depicted as pleasurable and sexually arousing to the female victim. The second category is **nonexplicit sexual aggression** against women, which includes depictions of male sexual aggression against women that are conceptually similar to violent pornography. Although rape may be depicted, it often would be the type permissible under television broadcast standards (e.g., the sex is far less explicit than in violent pornography). However, the idea that women derive positive benefit from sexual abuse may be the same. Some researchers have hypothesized that exposure to such materials often leads to the same effects as exposure to violent pornography. As discussed below, however, the very fact that a rape or similar portrayal is presented within a context that seems to be intended to arouse sexually (and therefore presumably please) the audience may make the portrayal more harmful than when the same depiction is not sexually explicit. This argument is reminiscent of the famous assertion that "the medium is the message."[53]

Two types of nonviolent materials have also been studied. The first is **nonviolent, low-degradation** pornography, which operationally consists of depictions of consenting, mutually pleasurable sexual acts between adults or pictures of nude women. Such portrayals are now often called erotica by some researchers. Considerable controversy surrounds the validity of the second category, which can be labeled **nonviolent, high-degradation** pornography. Researchers who use portrayals of this type usually label them demeaning, degrading, or dehumanizing to women because they depict women in subordinate positions, as being abused in some manner, or as oversexed or highly promiscuous. The validity of such a category is discussed later.

HOW SHOULD HARM BE DEFINED?

Diverse harms may result from the exposure of adolescents to certain types of pornographic media. The definition of harm need not be limited to the possibility that such exposure may directly incite to violence but may include changes in other spheres, such as attitudes that affect individuals and/or the cultural climate.[6,37,38,40,54]

Even if considerable scientific evidence showed various types of harm, the question of which remedies should be used may not be a scientific one. Policies about the use of legal or other alternatives involve moral/political decisions that result from weighing and prioritizing the perceived benefits and harms that may occur by restricting or not restricting consumers' access to materials that they desire.[36] This chapter focuses on the potential harm of attitudinal changes that may result from exposure to media materials. Research concerning the relationship between such

attitudinal changes and antisocial behavior, suggesting the conditions under which such attitudes do or do not affect behaviors, has been reviewed elsewhere.[40] The present discussion considers certain changes in attitude as harmful in and of themselves, regardless of whether they actually result in increased antisocial behavior, and also suggests that the processes presumed to underlie the effects found with sexually violent media are likely to occur with some other pornographic media as well.

The basis for much of this research has been social cognitive learning theory.[2] This is not simply a "monkey see, monkey do" theory but instead specifies various mechanisms by which people may be influenced by the environment to which they are exposed and the conditions under which certain influences are more likely to occur. Particularly relevant is the theory's focus on attitudinal mediators of behaviors.

HOW MUCH EXPOSURE IS THERE AMONG YOUTH?

Bryant and Brown review most of the available social scientific literature regarding levels of exposure to pornography among youths and adults.[8] They note the considerable limitations to research due to the sensitivity of consumers about the topic and the problems of different definitions used by respondents and investigators. Nevertheless, they were able to reach the following conclusions with considerable confidence:

> Exposure to pornography typically occurs at least by high school years, and usually is facilitated by peers. Only small proportions of people report no voluntary exposure at all. The image of the pornography consumer as a loner who lacks socialization skills appears, as a general rule, to be inaccurate (pp 52–53).

They also note that males are considerably heavier consumers of what is typically considered pornographic than females.

The actual data may be illustrated by a study conducted by Bryant.[7,8] The research was based on 600 telephone interviews designed to obtain normative information on amounts of exposure to various types of R- and X-rated media. The interviews were conducted in midwestern cities with random-digit dialing. Subjects were classified into three age groups: 13–15 years old, 16–18 years old, and 19–39 years old. Interviews were successfully completed with 100 males and 100 females in each group; about 40% of the people contacted responded to the questions. The findings indicated that by age 15 years, 92% of the males and 84% of the females had "looked at or read *Playboy* or *Playgirl*" and that by age 18 years, the proportion rose to 100% of the males and 97% of the females. The average age of first exposure was reported to be 11 years for males and 13 for females. High levels of exposure to films were also reported. For example, nearly 70% of 13–15 year olds, even though under age, reported exposure to an average of 6.3 sexually oriented R-rated films before the age of 13. In regard to X-rated media, among all respondents the average age of first exposure to a magazine that depicted couples or groups in explicitly sexual acts was 13.5 years; an average of 5 such magazines had been viewed. In regard to X-rated films, 92% of 13–15 year olds said they had already seen such a film, with an average reported age at first exposure of 14 years, 8 months.

A survey in Great Britain of a representative sample of children and adolescents assessed the frequency of exposure to video films that are legally classified as obscene (many would not receive such a classification in the United States). Because these films are banned in Great Britain, they were not viewed in theaters but in private homes on videos. According to the investigators,[53] "It is a matter of grave concern

that in the formative years, 45% of children . . . have seen one or more video films which would legally be classified as obscene in this country on account of the morbid, sadistic and repugnant nature of the violence they portray. The first knowledge of sexual life acquired by these children may come from viewing films in which sexual conduct is inextricably entwined with violence, hatred, coercion and the humiliation of women in particular" (p 3).

IS THERE CONSENSUS AMONG SOCIAL SCIENTISTS ABOUT EFFECTS?

Linz and Malamuth discuss how three theories—the conservative, liberal, and feminist—have guided definitions, thinking, and research on the subject of pornography.[36] They note that each theory is broadly based on values and assumptions that cannot be empirically tested. They also suggest that the theories function as "cognitive schemas" or implicit theories that have strongly affected the evaluation of research evidence.

In light of these implicit theories, the lack of a broad-based consensus among researchers about the effects of pornography is not surprising. Some conclude that the data clearly show strong and consistent effects in a wide variety of areas, whereas others believe that the findings are not convincing.[20,23,24,55]

As noted above, the tools available to researchers are often quite limited by ethical and practical constraints. For example, the ideal study investigating the effects of sexually violent media on children might include having some youngsters randomly assigned to view, over several years, a media diet that included many portrayals of sexual violence. Because for obvious ethical reasons such ideal research cannot occur, the studies available typically involve considerable compromises.

Certain tentative conclusions can be currently justified. It is important, however, to reiterate that they are not shared by all researchers:

1. **Exposure to certain media presentations may affect people's attitudes and perceptions, even if the audience is well aware that the media depictions are fiction.**

To many, this proposition seems so obvious that it does not require scientific support. The vast advertising industry clearly rests on the assumption that fictionalized media messages affect consumers' attitudes and behavior. This view is shared by many researchers, and various types of scientific evidence may be presented in its support. For example, studies show that when people are asked to imagine that a certain event occurs, they believe that such an event is more likely to occur in reality.[11] In addition, most social scientists accept the validity of a large body of literature that implicates media violence as a contributor to actual aggression in some of the audience. Although a few skeptics still exist, the disagreement primarily concerns whether exposure to media violence affects violent behavior outside the laboratory.[25] Virtually no authority disagrees that such exposure affects responses such as attitudes and laboratory aggression.[30] Meta-analyses of research, which systematically examine conclusions across large numbers of studies, conclude that media effects occur both for prosocial and antisocial attitudes and behavior, although differences in magnitude may exist.[29]

2. **Exposure to fictionalized portrayals of sexually violent messages in the media may, like some other media content, affect people's attitudes.**

The research described below analyzed media stimuli by the messages or meanings that they convey. Meaning is, of course, a function of both the message and the receiver's interpretations. The message given the most attention involved the consequences of sexual aggression. A series of experiments found that rape depictions that show the victim as ultimately deriving physical pleasure from her

experience fostered attitudes more condoning of aggression against women.[43,45,48,49] Rape depictions that portrayed the victim as abhorring the experience, on the other hand, were less likely to have such effects.[40]

The current controversy over a possible relationship between pornography and crime has led to a search for direct links between media exposure and deviant behavior. People have sought an immediate causal connection between media action and audience imitation. For example, a civil suit brought against National Broadcasting Company alleged that a rape portrayal in a television movie, "Born Innocent," resulted in rape by some juvenile viewers (*Olivia v. NBC*, 1978).

Beyond the dramatic popular notion that violent pornography spurs a minority of sexual deviants to criminal acts lies the far grayer and more complex, but potentially far more pervasive area of indirect effects. Evidence suggests that a wide range of media affects the general population in a variety of different ways. In particular, heavy exposure to sexual violence could affect thought patterns (e.g., attitudes, beliefs, perceptions, schemas) that are concurrently being shaped by family, peers, other media messages, and a host of other influences. If other risk factors exist in the person and in the environment, such thought patterns may contribute to acts such as stranger and date rape.[51] In the absence of other factors that contribute to aggression or in the presence of forces that inhibit (e.g., fear of punishment) or are incompatible (e.g., empathy) with violence, there is still some likelihood that thought patterns will be expressed in other ways, such as a not-acted-upon desire to be sexually aggressive, a sanctioning of sexual aggression in others, or sexist, discriminatory, and/or harassing behavior. Even when not translated into violent behavior, such effects have wide social implications.

Research Assessing Attitudinal Effects. To evaluate the hypothesis that exposure to sexually violent media may affect some viewers' attitudes, the cumulative evidence must be considered. As in virtually all areas of media effects, the impact on exposed subjects may vary considerably according to their cultural and individual background. Nevertheless, the data appear to justify certain conclusions.[14,18,40]

In three experiments, male subjects were exposed to depictions of mutually consenting sex; rape in which the female victim eventually became aroused; or rape abhorred by the victim. Afterwards the subjects were shown a depiction of rape and asked about their perceptions of the act and the victim. In two of the studies, subjects exposed to the positive portrayal of rape perceived the second rape as less negative than subjects first exposed to the other depictions.[43,49] One of the studies also found that the portrayal depicting victim arousal led men to perceive rape as a more normative act.[43] Subjects in the third experiment were asked how women in general would react to being victimized by sexual violence.[48] Those exposed to a "positive" rape portrayal believed that a higher percentage of women would derive pleasure from sexual assault. This effect was particularly apparent in men with higher inclinations to act aggressively against women.

A fourth experiment conducted outside the laboratory yielded similar results.[45] This study was specifically designed to use the advantages of the experimental method (i.e., random assignment of subjects to conditions) in a relatively naturalistic setting that would enable better generalization than the laboratory environment. Male and female undergraduates were randomly assigned to one of two exposure conditions. Participants in the experimental condition were given free tickets to view feature-length films on two different evenings that included portrayals of women as victims of aggression in sexual and nonsexual scenes. These films suggested that the aggression was justified or had positive consequences. On the same evenings, subjects in the control condition were given tickets to films that contained no sexual violence.

The films shown in both exposure conditions had been aired with some editing on national television. Subjects viewed the films with moviegoers who purchased tickets and were not part of the research. Classmates of the recruited subjects who did not see the films were also studied as an untreated control group. Several days after the films were viewed, a "Sexual Attitude Survey" was administered to the entire class. (Subjects were not aware of the relationship between this survey—purportedly administered by a polling agency—and the earlier films viewed by some students as part of an ostensibly unrelated study.)

Subject responses were assessed by scales developed by Burt.[9] They included acceptance of interpersonal violence (AIV) against women (e.g., acceptance of sexual aggression and wife battering); rape myth acceptance (RMA) (e.g. the belief that women secretly desire to be raped), and adversarial sexual beliefs (ASB) (e.g., the notion that women are sly and manipulating when out to attract a man). These measures were embedded within many irrelevant items intended to disguise the purpose of the survey.

Exposure to the films portraying positive effects significantly increased the scores of male but not female subjects on the AIV scale. A similar pattern was observed on the RMA scale, although the effect only approached acceptable levels of statistical significance. The ASB scores were not affected. Taken together, the data demonstrated effects of sexually violent movies on men's acceptance of violence against women; the effects were sustained for at least a few days. Moreover, the results were obtained in a nonlaboratory setting seemingly devoid of demand characteristics (i.e., subtle conveyance of their hypotheses by researchers to subjects).

The validity of the conclusions based on these studies is supported by the consensus reached by a group of leading social scientists assembled by the Office of the Surgeon General of the United States.[54] The researchers included Professor Albert Bandura, a highly renowned social learning theorist. According to one of the consensus statements, reached primarily on the basis of the studies described above, "pornography that portrays sexual aggression as pleasurable for the victim increases the acceptance of the use of coercion in sexual relations" (p 19).

Not all research has found similar effects.[12] For example, in one study Malamuth et al. found no changes in attitudes after exposure to media sexual violence that did not depict victim arousal.[50] A number of methodologic differences between this study and the others may help to explain the different findings. For example, in the experiments showing significant effects, the media stimuli were specifically selected because they clearly depicted violence against women as having positive consequences.

Sexually violent films that do not portray positive consequences may nonetheless affect viewers in undesirable ways. For example, Linz studied the effects of repeated exposure to X- and R-rated feature-length films that portray sexual violence with primarily negative consequences to victims.[34] He found desensitizing effects on viewers. In one experiment, male college students who viewed 5 such films had fewer negative emotional reactions to the films that they viewed. Also reported was a tendency for the subjects' desensitization to affect their judgments of a rape victim in a simulated trial presented after exposure to the films. In a second experiment, Linz again found that males exposed to several R-rated, sexually violent films became less sympathetic to a rape victim in a simulated trial and were less able to empathize with rape victims in general.[34]

Importance of Effects. Clearly, no influence on human thinking or behavior works in a vacuum; media influences interact with a variety of other individual and cultural factors—sometimes counteracting them, sometimes reinforcing them, and at

other times having little effect. The nature of the effects found by the research described above must be kept in perspective, because they have not been the wide-sweeping changes that some seem to assume. In fact, wide-sweeping changes are unprecedented in media research. Given the type and duration of exposures and the fact that the subjects are adults with relatively established attitudes, the most that can be expected is that, if effects exist, they would be detected only with careful and precise assessment specifically geared to the manipulations used. The fact that theoretic and empirical support exists for such effects, despite limits of the research, strongly points to the viability of the hypotheses proposed.

Some critics of the research on sexually violent media and other pornography seem to assume that the suggested effects are based on simplistic models of influence. For example, Fisher and Barak[23] write that "although we are quite prepared to assume that media models may have effects, we wish to distance ourselves from a position that suggests that human beings are easily influenced creatures who are essentially no better or worse than the last movie or series of movies they have seen" (p 291). The nature of the potential effects that are emphasized here and elsewhere is by no means simple, direct imitation.[40] On the basis of available research, it is not feasible to gauge the relative importance of media influence generally and of pornography specifically in comparison with other factors. In the author's opinion, pornography in and of itself is unlikely to exert a powerful effect on most people, but the consensus statement of the Surgeon General's Workshop[54] concluded, "Pornography does have effects; it is just not yet known how widespread or powerful they really are" (p 19). The effects of pornography may be important for some individuals but not for others, and they may be relatively powerful only as they interact with other factors.

Individual Differences and Synergistic Effects. In fact, one of the problems in the literature has been the use of oversimplistic models, including the lack of sufficient consideration of the role of individual and cultural differences as moderators of media influences. Researchers have largely attempted to consider the role of media stimuli in isolation from other variables, often not giving sufficient consideration to the role of the media in complex interactions with other influences.

Fisher and Barak[24] seem to recognize this problem: "for an individual who has not been adequately socialized, but not for persons in general, pornography or any other media message may indeed produce antisocial effects" (p 73). Yet in their evaluation of the research on pornography, they do not seem to give sufficient consideration to such differences. For example, they describe the study by Goldstein[26] as showing that "the sex deviates had less exposure to what we would define as erotica (e.g., heterosexual acts) as well as less exposure to what we would define as violent pornography (e.g., sadistic and masochistic material)" (p 300). A careful reading of a more detailed version of this same study, however, indicates that although rapists reported less exposure to pornography in adolescence than the control groups, various aspects of the data suggest that the type of pornography to which rapists were exposed and the degree to which they were affected by it may have differed.[27] For example, rapists reported an earlier age of peak experience with pornography. In addition, they were far more likely to have encountered pornographic photographs displaying explicit sexual acts (rather than nudes) at an early age and to have had a greater desire to imitate the activity portrayed in pornography (although they said they were less likely to have actually done so). Rapists were more likely to relate daily masturbation to thoughts of pornography, to have developed a stronger interest in pornography early in life, to have become repeatedly aroused by a particular theme, and to have more feelings of frustration and guilt related to their exposure to pornography than control subjects.

Although Goldstein et al. did not specifically inquire about pornography involving coercive sex themes, depictions involving sexual violence (e.g., motorcycle films depicting "gang bangs") frequently became part of rapists' daydreams and fantasies.[27,28] In addition, the authors report that 55% of the rapists (as compared with 9% of the controls) used scenes from pornography in their fantasies and daydreams.[27] Of interest, programs for treating rapists place considerable emphasis on changing their sexually violent fantasies.[1]

How can we account for the data suggesting that rapists had less exposure to pornography in childhood but may have been more affected by such exposure? Goldstein's study as well as other research suggests that rapists were more likely to come from home environments where education about sexuality was highly restricted and sex in general was treated as a taboo subject.[27] (The relatively minimal exposure to erotica may have been a byproduct of this attitude). With such a background, exposure to pornography might be expected to exert a relatively more powerful influence on rapists' responses because it would be more of a primary source of information and stimulation.[42]

Such a conclusion is consistent with other research. In one study,[41] university students indicated how much information about sexuality they obtained in their childhood from various sources, such as peers, parents, church, educational media, educational courses, sexually explicit media, and doctors. Sexually explicit media was ranked second only to peers as the most important source of information. Subjects who reported obtaining more information from explicit media also held attitudes more supportive of violence against women. Such a correlation was not found with the other sources of information about sexuality. Information from sources such as educational courses actually correlated with lower levels of attitudes supportive of violence against women. In fact, the link of sexually explicit media to antisocial attitudes tended to be stronger when compared with other sources of sexual information than when measured alone. Similarly, Tjaden asked college students to indicate all sources from which they may have received information about various sexual topics as they were growing up.[60] Sources included school, church, parents, peers, mass media, and nonpornographic books and magazines as well as pornographic magazines and films. In general, pornography was relatively unimportant for females. For males it was also unimportant for some topics, such as venereal diseases, pregnancy, and childbirth. However, for other topics—masturbation, arousal and orgasm, and oral and anal intercourse—men reported pornographic materials as an important primary or secondary source of information.

Focusing only on quantity of exposure, therefore, may be an oversimplified approach. People raised with little education about sexuality or in families in which sex is treated as taboo may be more susceptible to the influences of certain types of explicit media than people reared with considerable education about sex.[42] The latter can more accurately assess the myths about women and sexuality portrayed in certain types of pornography. People without much sex education may be more apt to use explicit media as a primary source of information.

Similarly, the impact of a particular variable may have synergistic effects when interacting with other factors.[39] Using a national representative sample of post-high school students,[52] a recent study examined whether subjects who consumed relatively high levels of pornography were more likely to be sexually aggressive.[51] Their findings showed that for the population as a whole, information about pornography usage did not add a great deal of predictive value. Significant predictive value, however, was found for those men who had earlier been identified as at highest risk for committing sexual aggression. Although these data do not allow inferences

about cause and effect, they illustrate the importance of not relying on simple models of the potential impact of pornography or any other factor; instead, the potential interactive effects of various factors must be probed carefully, particularly for some subjects.

That exposure to some types of pornography may especially affect men at greater risk for committing sexual aggression is consistent with earlier experimental research. Because subjects were randomly assigned to conditions, cause and effect could be inferred.[13,48] These studies indicated that men scoring relatively high in pretest measures of risk characteristics (e.g., self-reported attraction to sexual aggression) showed the most pronounced effects of exposure to sexually violent and highly degrading pornography.

3. **The effects of the messages may differ depending on the presence or absence of sexually arousing stimuli.**

This assertion relates to the question of whether sexually explicit media should be treated differently than nonexplicit media, an issue of much debate among legal scholars and policymakers, but it does not suggest that sexual explicitness per se is the critical factor affecting the potential harm of exposure to certain media stimuli. On the contrary, a PG-rated film showing rape in a positive light could be more socially detrimental than an X-rated film without sexual violence.[40] The degree of sexual explicitness may be less relevant than the message conveyed by the depiction of sexual aggression. However, the fact that a rape is portrayed within a sexually explicit context may alter the message conveyed. For example, a depiction of the rape of Bosnian women in a context clearly intended to be sexually arousing would convey a different message than the depiction of the same acts in a documentary intentionally designed to avoid gratuitous sex. The use of sexual explicitness in media often conveys to the consumer that the acts portrayed may be used for entertainment and are therefore not particularly objectionable.

Other processes may also affect the impact of a message conveyed in a sexually explicit context. In research on attitude change, considerable evidence shows that people's states of arousal and mood have a substantial effect on their degree of susceptibility to media messages. For example, the evidence suggests peripheral routes to persuasion[31]; that is, people in elated moods or high states of arousal engage in relatively little systematic analyses of rational content and may be influenced by the message despite the weak arguments in its favor.[57] Similarly, research into the effects of arousal and valence on memory demonstrates that arousal in particular has powerful long-term effects. Pleasantness of the experience may also influence degree of susceptibility to influence.[5] Similarly, research on subliminal conditioning of attitudes demonstrates that attitudes can develop without rational deduction and without an individual's awareness of the process.[32] Moreover, men's individual differences in the sexually arousing properties of pornographic media may increase the likelihood that some consumers will choose to expose themselves repeatedly to similar themes and messages.[44,46] In summary, research suggests that exposure to messages in the context of pornography, where relatively high states of arousal and positive affect may occur, could have considerably stronger effects than exposure to the same messages in a neutral state of arousal or affect.

4. **Research on sexually violent media may be applicable to other media that do not contain sexual violence.**

Can "degrading or dehumanizing" be reliably and validly defined in relation to sexually explicit materials? The concept of degrading pornography has played an important role in Canada's recent Supreme Court decision, which substantially changed the definition of obscenity and the materials that can be banned.[10]

In sociologic and psychological literature the concept of degradation involves a demotion in social rank or status, which conveys a loss of standing or privileges.[3,21,33] "Dehumanization" conveys the same idea. Some studies have focused on the validity of such concepts. For example, Senn and Radtke differentiate between three categories of sexually explicit materials:

1. **Erotica** is defined as "images that have as their focus the depiction of mutually pleasurable sexual expression between people who have enough power to be there by positive choice" (p 37).[59] Such images have "no sexist or violent connotations and portray equal power dynamics between individuals as well as between the model(s) and the camera/photographer" (p 144).[58]

2. **Nonviolent pornography** is defined as "images that have no explicitly violent content but may imply acts of submission or violence by the positioning of the models or the use of props. They may also imply unequal power relationships by differential dress, costuming, positioning, or by setting up the viewer as voyeur (the model is engaged in some solitary activity and seems totally unaware or very surprised to find someone looking at her)" (p 144).[58] This category is similar to that labeled as degrading or dehumanizing by other researchers.

3. **Violent pornography** is defined as "images that portray explicit violence of varying degrees perpetrated against one individual by another."[58]

The investigators found that their subjects, Canadian undergraduate women, could reliably differentiate among these categories. The five female raters agreed on about 75% of the stimuli used (taken from *Playboy*, *Penthouse*, and *Hustler* magazines and from two books), but disagreed considerably on 25%. Furthermore, the subjects evaluated the violent and nonviolent pornography negatively but the erotica positively. Finally, the women were affected differently by exposure to the different materials. After two 30-minute sessions of exposure, women exposed to violent and nonviolent pornography had increased mood disturbance, but such negative effects on mood did not occur for women exposed to erotica or for controls.

Delineating what is degrading or dehumanizing may be feasible. However, considerable "gray" areas where differentiation is not reliable will probably remain. A number of themes have been included in defining degrading or dehumanizing materials,[17] such as: (1) **demeaning actions**, which include calling the person an animal or a bitch, using abusive language, or ejaculating in a person's face; (2) **dominance**, in which one of the participants is shown to be in a far less powerful and more subservient position than the other (e.g., a fully clothed man with a partly clothed woman in a maid's outfit), and (3) **objectification**, in which the participants, most frequently the women, are portrayed merely as objects to be used for sexual pleasure. Other, less useful themes include **indiscriminate availability**, which portrays the woman as willing to have instant sex with anyone, and **penis worship**, which emphasizes centrality of the penis and/or its ejaculate.

A number of studies provide evidence that the processes described above in the context of sexually violent media may apply to other materials as well. For example, one of the consensus statements from the group assembled by the Surgeon General was that "prolonged use of pornography increases beliefs that less common sexual practices are more common."[54] This conclusion was based mainly on the research of Zillmann and associates.[64,65,69] Zillmann and Bryant[65] showed male and female undergraduates varying amounts of pornographic films. The massive exposure group viewed 6 different 8-minute sexually explicit films during each of the 6 weekly sessions; the intermediate exposure group viewed 3 erotic and 3 nonerotic films; and the no-exposure group viewed 6 nonerotic films. The erotic films contained only consenting heterosexual activities of fellatio, cunnilingus, coition, and anal intercourse.

Three weeks after the end of the exposure, the subjects completed various questionnaires, one of which asked them to estimate the percentages of adults in the United States who engaged in various common and uncommon sexual practices. In comparison with the groups who had no exposure or no prior treatment, subjects in the intermediate and massive exposure groups estimated that significantly higher numbers of adults engaged in fellatio, cunnilingus and anal intercourse. In addition, estimates of the prevalence of group sex, sadomasochism, and bestiality were higher for the massively exposed group than for the other groups, even though none of the pornographic material to which they were exposed included these types of activities.

Additional studies by Zillmann and associates as well as others also provided relevant data.[13,61,64,67,68] These studies indicate that as a function of exposure to certain nonviolent pornography, some men (1) become less repulsed by extreme forms of pornography; (2) were more likely to believe that various unusual sexual behaviors were more common; (3) were less condemning of such behaviors; and (4) were more likely to indicate some likelihood that they would coerce a woman sexually if they were assured of the lack of negative consequences to themselves. Other studies, however, have not found similar effects, particularly when reactions to rape are measured.[35] Methodologic differences may help to explain the divergent findings. Future research should focus on disentangling the conditions under which effects are or are not likely to be found.

5. **Once negative attitudes have been formed, they may not be easily reversed by educational interventions.**

Instead of attempting to limit people's exposure to certain types of pornographic media that may have negative effects, it may be preferable to use educational interventions to counteract the possible harmful effects. Indeed, early research revealed the effectiveness of educational interventions; the author and associates have actively advocated educational interventions.[15,37,47] A note of caution, however, is necessary: recent research indicates that once developed, attitudes such as beliefs in rape myths may be difficult to change. In fact, some people who already hold such beliefs to a relatively high degree may evidence boomerang effects; that is, attempts to change negative attitudes may have the opposite effect of strengthening them.[22,62] These particular studies, however, focused on the types of attitudes that other research had shown to be affected by media exposure; they did not investigate how the beliefs in rape myths were formed originally.

CONCLUSIONS

There seems to be scientific support for the hypothesis of harmful effects on some men of certain types of pornographic stimuli. To reach conclusions about adolescents, it is necessary to infer that the effects found with young men (i.e., at least 18 years old) are likely to be as clear or stronger for adolescents. This assumption is consistent with findings in other media research, which indicate that effects are more pronounced for those less likely to have had experience with and education about the content of media messages.[4]

The data suggest that the type of messages conveyed within the portrayals (e.g., violent, degrading) is crucial to the impact of the materials. Sexual explicitness per se does not have harmful effects, as defined in this chapter. However, when a message is presented within a sexually explicit context, it may have different effects than when presented in a nonexplicit context, because the content is perceived differently and because arousal is generated. Furthermore, research suggests that those subjects who

already have some risk of being attracted to sexual aggression or similar behavior are most likely to be influenced by exposure.

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Rock Music and Music Videos

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Sex sells in America, and as the advertising world has grown ever more risque in pushing cars, cosmetics, jeans, and liquor to adults, pop music has been forced further past the fringes of respectability for its rebellious thrills. When Mom and Dad watch a Brut commercial in which a nude woman puts on her husband's shirt and sensuously rubs his after-shave all over herself, well, what can a young boy do? Play in a rock 'n' roll band and be a bit more outrageous than his parents want him to be. Kids' natural anti-authoritarianism is going to drive them to the frontiers of sexual fantasy in a society where most aspects of the dirty deed have been appropriated by racy advertising and titillating TV cheesecakery.

Terence Morgan, *The New Republic*[27]

Music and musical performers have always played an important role in learning and culture. Music has powerful effects on attitudes, moods, and emotions. Rock music, which developed in the adolescent cultural environment of the 1950s, has undergone dramatic changes. Although its influence on adolescents has always been a source of concern to society, in recent years there has been a growing concern about its potentially negative influence on youth.[1,6,16,37]

The term rock music is frequently used to include any type of music listened to by teenagers. However, the music that teenagers listen to today is far different from the music that first defined rock and roll. Music currently popular with teenagers includes punk, new wave, heavy metal, and rap, in addition to old-style rock and roll (Table 1). Although old-style rock and roll had rebellious and sexual connotations, some of the music popular with the teenager of today is far more graphic (Table 2).[7,27,32]

A concern to many interested in the healthy development of adolescents is the deterioration in the messages of some rock music. Prominent among these troublesome themes are:[16]

TABLE 1. Teenagers' Tastes in Modern Music*

Favorite Music Type		Groups Most Often Cited	
Rock	31%	Bon Jovi	10%
		U2	2%
Rap	18%	Run DMC	6%
		LL Cool J	4%
		Beastie Boys	4%
Soul	18%	New Edition	3%
Heavy metal	13%	Motley Crue	2%
		Poison	2%

* N = 2760 14–16 year-olds.
Adapted from Klein JD, Brown JD, Childers KW, et al: Adolescents' risky behavior and mass media use. Pediatrics 92:24–31 1993.

- Glamorizing abuse of drugs and alcohol
- Pictures and explicit lyrics presenting suicide as an "alternative" or "solution"
- Graphic violence
- Preoccupation with the occult: songs about satanism and human sacrifice
- Sex that focuses on sadism, masochism, incest, and devaluation of and violence toward women

The purpose of this article is to describe the influences of popular music and music videos on adolescent development and identity formation; to indicate when concern seems warranted; and to make suggestions related to these concerns for parents of teenagers as well as for health care professionals who deal with adolescents.

POPULAR MUSIC

The terms "popular music" and "rock music" are used in this paper to refer to music currently listened to by adolescents. Listening to popular music increases throughout childhood, becoming more frequent around age 9 or 10, and peaks in late high school or college. In comparison, television viewing peaks in early adolescence and declines as music listening is peaking. In later adolescence, duration of television viewing and music listening ranges from 4 to 5 hours a day, often occurring simultaneously.[10] One recent study of more than 2700 teenagers found that they listen to music an average of 40 hours per week (although much of this may represent background use).[25]

Heavy metal music, once only a fringe category of rock music, is characterized by the loud, pulsating rhythm of electric bass guitar and drums. Heavy metal performers frequently espouse violence, dominance and abuse of women, hate, the occult and satanism, and death. Groups with names such as Metallica, Black Sabbath, Megadeath, Slayer, and AC/DC have become increasingly popular. In 1989, the heavy metal group Guns-N-Roses reported a 2-year income of over $20 million.[3]

Rap, which has its roots in the black culture, is characterized by talking to a musical beat, and is at times angry and violent. One song called "Cop Killer" by Ice-T includes the lyrics "I'm 'bout to bust some shots off/I'm 'bout to dust some cops off" and a chant, "Die, Die, Die, Pig, Die!" Police organizations from around the country demanded the recall of the recording.[26] Although Warner Brothers stood its ground, Ice-T asked that the track be removed from all future productions of his album. However, rap is not unidimensional. Some point to an undercurrent in rap

TABLE 2. A Sampling of Modern Rock Lyrics

Sex

I knew a girl named Nikki
I guess you could say she was a sex fiend.
I met her in a hotel lobby
Masturbating with a magazine.

"Darling Nikki," by Prince

Violence

Gonna pulp you to a mess of bruises
'Cause that's what you're looking for.
There's a hole where your nose used to be
Gonna kick you out my door.
Gonna get into a fight . . .
Gonna blow you to a million pieces,
blow you sky high . . .
Splatter matter on the bloody ceiling . . .
Gotta get into a fight.

"Fight," by the Rolling Stones

Sexual Violence

Sounds like an animal panting to the beat
Groan in the pleasure zone, gasping from the heat.
Gut wrenching frenzy that destroys every joint.
I'm gonna force you at gun point
To eat me alive . . . squealing in passion as the
rod steel injects.

"Eat Me Alive," by Judas Priest

To have her walkin' funny we try to abuse it
A big stinking pussy can't do it all
So we try real hard just to bust the walls.

2 Live Crew, from the album, *As Nasty As They Wanna Be*

Don't you struggle
Don't you fight
Let me put my love into you
Let me cut your cake with my knife.

"Let Me Put My Love Into You," by AC/DC

Drugs

I smoke Cheba, it helps me with my brain
I might be a little dusted but I'm not insane . . .

"Paul's Boutique," by the Beastie Boys

Suicide

Made your bed, rest your head
But you lie there and moan
Where to hide, suicide is the only way out
Don't you know what it's really about?

"Suicide Solution," by Ozzy Osbourne

Satanic Worship

Undress until you're naked
And put on this white coat
Now crush it, crush the cross
Suck the blood from this unholy knife
Say after me, my soul belongs to Satan
Now you're into my coven
You are Lucifer's child.

"Into the Coven," by King Diamond

Racism

Police and niggers, that's right, get outta my way
Don't need to buy none of your gold chains today . . .
Immigrants and faggots, they make no sense to me
They come to our country and think they'll do as they please . . .
Like start some mini-Iran or spread some fuckin' disease.

"One in a Million," by Guns 'N' Roses

that, beneath the sometimes harsh imagery, embraces such traditional social values as nurturing, education, and self-sufficiency.[26]

The impact of today's rock music goes beyond simply the lyrics, rhythm, and sound to the influence of the visual media. Music videos are used by television producers to gain an audience and by record producers to sell music. Advertisers frequently use rock music to appeal to an "upscale" audience that has purchasing power. There is concern that the power of the music and lyrics becomes magnified when visual images are added to them, increasing the risk of deleterious effects on young people.

Music video has become a pervasive and influential form of consumer culture and has altered the television viewing, music listening, and record buying habits of the young people who constitute its audience.[8] It is estimated that 43% of American teenagers watch music television (MTV),[12] and may spend over 2 hours a day doing so, although most studies report closer to 30–60 minutes per day.[40] Music television (MTV) grows by more than five million households a year and is now available in

55 million homes.[31] It is also available in 40 countries overseas, reaching more than 194 million households.[31] As a commercial medium, its profits are projected to be nearly $100 million.[31] The effects of MTV's advertising content are considerable and have been examined in detail elsewhere.[39]

There are two common types of music videos. In a "performance" video, a musical performer or group sings the song in concert or in a studio. A "concept" video consists of a story that goes along with the song which may or may not add a plot to the lyrics. Although performance videos can occasionally be outlandish (e.g., David Lee Roth's attire or his masturbating on-stage with a huge inflatable phallus in the video "Yankee Rose"), there is no evidence that such videos have demonstrable behavioral impact.[1,37] Such behavior is roughly the equivalent of Elvis Presley gyrating his hips in the 1950s and creating angst among parents of that era. Rather, it is the concept videos that have attracted much of the criticism for promoting violence and sexual promiscuity.

Watching music television differs from watching "regular television" for the adolescent in the following ways: (1) it is usually viewed with peers rather than with the family or alone, (2) viewing is more active than passive, and (3) as discussed later, the reasons for watching it may be different.

ADOLESCENT DEVELOPMENT AND IDENTITY FORMATION

Adolescence is a time of special stress. A number of physical, psychological, and sociological influences are brought to bear on the individual at this stage of development. Adolescents negotiate these stresses with varying degrees of mastery. Most (80% or more) do well.[28] Others, who have not developed successful coping skills, may suffer stress-related disorders. The expression of these disorders is often related to societal influences on the adolescent.[23]

The central issues or tasks for the adolescent include: (1) movement toward independence—including the establishment of a sense of identity, emotional regulation and expression, and increasing interest in the peer group—all leading to an ability to make independent decisions, (2) the consolidation of a sexual identity, including the ability to form meaningful and loving relationships, and (3) the establishment of a sense of ethics and self-direction, including the development of standards of behavior that can be reconciled with the adolescent's perceptions of adult standards.

During this period, adolescents seek information from sources other than their families. In this context the mass media can play an important role in providing information to teenagers. In addition, ample data exist that the media are important in shaping attitudes and beliefs about the adult world and how adults act.[13,18,29] However, the effects of the media in general and the music media in particular depend on the variations in how adolescents deal with their developmental tasks.[10] Recent studies document that not all teenagers view media content in the same fashion.[7,38]

Music can play an important role in the socialization and identify formation of an adolescent. It can become a symbol of their search for independence and autonomy. Adolescents use music for specific subcultural purposes such as the reinforcement of peer group identification[34] and as an important symbol of and vehicle for normal anti-establishment rebellion.[37]

The performers of popular music also have an important role in adolescent development as role models.[4,37] One of the primary ways that children and adolescents learn from the media is by seeing attractive adult role models demonstrating adult

OUR STUDIES HAVE FOUND THAT THE MINDLESS SEX, DRUGS, AND VIOLENCE IN MUSIC VIDEOS ARE HARMFUL TO YOUNG PEOPLE...
...AND THEY MAY SOON WANT THE REALLY BAD STUFF...
...'GERALDO'!
COMMITTEE ON COMMUNICATIONS
AMERICAN ACADEMY of PEDIATRICS

FIGURE 1. Editorial cartoon. Copyright © 1988, Gary Brookins, Richmond Times-Dispatch. Reprinted with permission.

types of behavior.[4] There is concern that the lives and deaths of rock stars can influence young people to do the same with their lives. Although there are anecdotal reports of young people being influenced to take their lives by the lyrics of some popular music (two deaths attributed to Ozzy Osbourne's "Suicide Solution," for example), there are no published reports that the self-induced death of such performers as Janice Joplin, Jimmie Hendrix, or Jim Morrison have resulted in any deaths modeled after theirs.

The question regarding the influence of popular or rock music, videos, or performers on an adolescent needs to be qualified by the following questions: "Which music?" "Which adolescent?" "At what stage of development?" "With what coping abilities and environmental stresses?"

The following case vignettes illustrate the important role rock music plays in the life of an adolescent and how one cannot talk about the effect of music and music videos without talking about the individual adolescent.

Case 1: Sean was a 16-year-old emotionally reserved boy whose parents ended their marriage in an acrimonious divorce 3 years earlier. Because of parental fighting, Sean saw little of his father, and when he did, they usually had a fight about the father's young girlfriend. Sean was extremely interested in the martial arts and heavy metal music. After school, he often went into his room and read martial arts books while listening to groups like Metallica and Slayer. He reported feeling less alone and angry after this, although it upset his conservative mother. Sean has never been violent, although he continues to be emotionally reserved and socially withdrawn. Currently he is attending law school.

Case 2: Owen was a 15-year-old boy whose parents are bright university professors who were adolescents during the 1960s. They became concerned that Owen might be involved with drugs because he was very interested in acid rock and the music associated with the drug culture in the 60s. Owen was bright, but not doing well in school. He said he found it difficult to do as well as his successful parents. He tried recreational drugs, but stopped drug use around age 17. Currently, he is attending a liberal arts university and identifies with the "artsy liberal types" there.

Case 3: Kurt was a 17-year-old boy whose parents divorced when he was young. He had limited contact with his alcoholic father. Kurt always had trouble in school and also had some minor trouble with the law. He became involved in a satanic cult where he and others frequently listened to heavy metal rock. He was hospitalized in an adolescent psychiatric hospital after a suicide attempt. While there, he admitted to being involved in several human sacrifices as part of the satanic cult.

THE INFLUENCE OF ROCK MUSIC AND MUSIC VIDEOS

The average teenager between the 7th and 12th grades listens to 10,500 hours of rock music.[15] This is almost as much time as the young person spends in the classroom from kindergarten through high school (12,000 hours). Although rock music can be used by adolescents to help establish an identity separate from that of their parents, it is also used by them to relax, to be entertained, and to avoid loneliness.[32]

It is difficult to gauge the emotional and behavioral effects of music on adolescents. To do so would require a controlled, longitudinal correlational study that would be extremely complicated to perform. In such a study, two large samples of adolescents would have to be assessed over several years—one with little or no exposure to rock music, the other with heavy exposure. Virtually no funding is available to conduct such studies.[38] To date, current studies are small in scale and are often anecdotal. However, the results are suggestive that music videos, in general—much like television programming in general—may represent an important *alterable* influence on children and teenagers. The most methodologically sound studies are reviewed below.

ROCK MUSIC

Although rock music has unquestionably become more graphic in the past two decades, there is *no evidence* to suggest that sexy or violent lyrics have demonstrable adverse behavioral effects.[1] On the other hand, *objections to sexually explicit or violent lyrics* ***can*** *exist on common sense, philosophical, aesthetic, humanistic, or public health grounds as well as on scientific grounds.*[19] Rock music is an important badge of identity for many adolescents and, as such, its ability to outrage adults is actually desirable. Rock music and radio are frequently used as background accompaniments to doing homework, talking with friends, or even watching TV. Moreover, research does exist that shows that most teenagers do not even know the lyrics to their favorite songs and, even if they do, their ability to comprehend the meaning is entirely age-dependent:[20]

- Only 30% of teenagers know the lyrics to their favorite songs (40% if they are heavy metal fans).[20]
- Even if they know the lyrics, children may not comprehend their meaning, particularly at younger ages. For example, only 10% of 4th graders could correctly interpret Madonna's "Like a Virgin," and nearly 50% of college students thought that Bruce Springsteen's "Born in the U.S.A." was a song of patriotism, not alienation.[20]
- Comprehension of rock music lyrics increases with age. Lyrics are often misunderstood by younger children who are at a more concrete level of cognitive development.
- Teenagers' motivation, experience, and knowledge are *crucial* factors in their ability to interpret lyrics. Young people frequently miss the sexual themes in lyrics. Whereas adults see such themes as sex, drugs, violence, and satanism in current rock music, teenagers interpret their favorite songs as being about "love, friendship,

growing up, life's struggles, having fun, cars, religion, and other topics that relate to teenage life."[32]

- Adolescents who prefer songs with themes of homicide, suicide, and satanism (usually heavy metal music) spend more time listening to the music, are more likely to listen to the lyrics, and are less likely to think the music would negatively influence their behavior compared with students who prefer other types of music.[41]
- A preference for heavy metal music may be a strong marker for substance abuse and other risk-taking behaviors.[24,25] Among adolescents in a hospital psychiatric unit, 59% of those admitted primarily for chemical dependency rated heavy metal as their musical preference. Many of them were also involved in violence, stealing, and sexual activity. A second group of patients characterized by psychiatric disturbance and a lesser extent of substance abuse had less evidence of conduct disorder and only 39% rated heavy metal as their first choice. In contrast, only 17% of patients with primarily a psychiatric disorder rated heavy metal as their first choice. They were also less likely to be involved in conduct disordered behavior.
- Self-described adolescent heavy metal music fans who completed a questionnaire study indicated that the music represented a very important part of their lives.[2] They strongly identified with the heavy metal music performer and with a negative life view such as environmental destruction and suicidal despair. However, it seems the music served to release and dispose of anger and frustration. The adolescents did not appear to be motivated by rebellion or defiance of their parents.

MUSIC VIDEOS

An important analogy exists: rock music is to radio as music videos are to television. As a visual medium, music videos are capable of influencing children and teenagers' ideas about adult behavior and, potentially, even modifying their behavior—although no study has shown a direct cause-and-effect relationship. Sexual and/or violent images added to rock music can significantly influence the enjoyment but not necessarily the appreciation of the music.[42] Although adolescents seem to appreciate primarily the music, the addition of sexual or violent images seems to increase the excitement. Concern about music videos seems justified, given that numerous studies have documented television's potential harmful effects in the areas of violent content and aggressive behavior, the influence of advertising on adolescents' smoking and drinking behavior, and a link between sexually suggestive programming and distorted views of human sexuality.[13]

Music videos are an extremely compelling and effective medium. They are self-reinforcing: if viewers hear a song after having seen the video version, they immediately "flash-back" to the visual imagery in the video.[21] Nevertheless, no behavioral studies have been done to date examining music videos' impact on adolescents' behavior. What research remains is in two forms: (1) content analyses—simply counting up what behaviors are depicted in videos without drawing any inference about their impact (although other television research, especially on violence, would suggest that the impact is significant on some children and adolescents) and (2) experimental studies—examining teenagers' attitudes about and comprehension of different types of videos.

A content analysis of music videos in 1985 revealed that the characters portrayed were primarily white and male.[36] Episodes of violence occurred in 57% of concept videos and, again, white males were most likely to be the aggressors. Wrestling, punching, and grabbing were the most common forms of aggression, and the outcome of the aggression was rarely shown. Sexual intimacy appeared in over three-quarters

of the music videos studied and was more implied than overt. Half of all women were dressed provocatively and were often presented as upper-class sex objects. These results parallel those from regular television in that the primary characters are usually white males and in the amount of violence and sex. However, music television has recently been much more open to black performers due in large part to the popularity of rap music.[26]

The themes found to be the most common in music videos include in order of occurrence: visual abstraction (use of special effects to produce odd, unusual, and/or unexpected representations of reality), sex, dance, and violence and/or crime.[5] Sexual contact and violence were both understated characteristics.

Music videos have also been shown to contain nihilistic images in 44% of the concept videos studied.[15] This included themes of destruction, death, ridicule of social institutions, and aggression against authority. As such, they seem to play on the presumably rebellious nature of the intended adolescent audience.

The concern that the violence in music videos might desensitize the viewer to violence has been borne out in at least one study.[33] Desensitization effects appeared to operate on both a short- and long-term basis. It has also been reported that 7th and 10th graders, after watching one hour of selected music videos, were more likely to approve of premarital sex than were an adolescent control group.[22]

Studies of adolescents' comprehension of music videos reveals that they often perceive the themes differently than do adults or other adolescents and that they may even "miss the point." Adolescent viewers of a Madonna video, "Papa Don't Preach," differed in how they interpreted the story elements based on sex and race (Table 3).[7] Black viewers were almost twice as likely to say the video was a story of a father-daughter relationship, while white viewers were much more likely to say it was about teenage pregnancy.

In spite of these studies suggesting potential negative consequences from watching music videos, it appears adolescents are primarily interested in viewing music videos for enjoyment of the music, to find out what the song lyrics mean, and to learn about what is popular.[40] For the most part, their favorite songs are about love and friendship, growing up and having fun—topics that are part of normal adolescent life.[32]

EFFECTS OF PARENTAL ADVISORY LABELS

Since 1985, recording companies have been adding parental advisory labels to record albums, tapes, or compact discs that are judged violent, sexually explicit, or potentially offensive ("Explicit Lyrics—Parental Advisory"). Record companies are given the alternative of printing such lyrics on album jackets as consumer information for parents.[30] There has been a great deal of controversy about whether the labeling would result in the recordings becoming more or less appealing to adolescents.

A questionnaire study regarding teenage perceptions of popular music found that most students could not accurately describe the themes of their favorite songs and were not usually aware of the content or meanings of the lyrics.[32] This raises the concern that labeling the album will call attention to the very themes that parent groups object to. In addition, printed lyrics on the jacket cover might make previously indecipherable lyrics easily accessible. (Imagine, for example, if The Kingsmen had published the lyrics of "Louie, Louie" on their album cover. The Federal Communications Commission once tried, unsuccessfully, to figure out the lyrics and concluded that the song is unintelligible at any speed, played backward or forward.)

TABLE 3. Do Teenagers View Madonna Music Videos Differently? Reactions to "Papa Don't Preach," by Race and Sex

Primary Theme	Black Males (n = 28)	Black Females (n = 40)	White Males (n = 54)	White Females (n = 64)
Teen pregnancy	21%	40%	**56%**	**63%**
Boy/girl relationship	21%	5%	15%	5%
Father/daughter relationship	**43%**	**50%**	22%	25%
Independent girl making a decision	14%	5%	7%	8%
Part of theme deals with pregnancy	43%	73%	85%	97%

Reprinted from Strasburger VC: Adolescent sexuality and the media. Curr Opin Pediatr 4:594–598, 1992, with permission. Data from Brown JD, Schulze L.[7]

In an experimental study involving young adolescents, they were asked to evaluate labeled and unlabeled music.[9] The adolescents liked the labeled music less well, but the impact was limited. The adolescents reacted primarily to the music per se, rather than to the lyrics.

More study is needed to determine the positive and negative effects of labeling on different aged young people as well as the type of young person most at risk for being influenced by the music of concern.

THE ROLE OF PARENTS AND HEALTH CARE PROFESSIONALS

As children grow older, parents pay less attention to the music and videos that hold their children's interest. Music may be a major part of an adolescent's separate world. It is quite common for teenagers to get pleasure from keeping adults out and causing adults some distress.[16]

The public and parents should be made aware of sexually explicit, drug-oriented, or violent records, tapes, and music videos. In addition, they should act with coalition groups to encourage broadcasters, producers, and performers to demonstrate good taste and self-restraint in what is produced and broadcast.[1]

Parents can help their teenagers by paying attention to their teenagers' purchasing, listening, and viewing patterns, and by helping them identify music that may be destructive.[16] They should ask their adolescents about their musical preferences, know their favorite performers, and nonjudgmentally try to understand what they like about the music and the musical performance. If the music being discussed is particularly offensive, parents should express their dislike and offer reasons for their feelings.

Parents might also encourage their children and adolescents to listen to a wide variety of music styles, including jazz, classical, blues, and "new age." They should also explain their own likes and dislikes in music.

Music is not usually a danger for a teenager whose life is happy and healthy. But if teenagers are persistently preoccupied with music that has seriously destructive themes, and they manifest changes in behavior such as isolation, depression, alcohol or other drug abuse, further questioning and possibly a psychiatric evaluation should be considered.[16]

Physicians should be aware of the potential public health influences on adolescent behavior, including the effects of the media. They can then engage in meaningful conversations with parents and public policy-makers regarding the music produced and the nature of its influence on developing youth.

CONCLUSIONS

It is difficult to establish a cause and effect relationship between music and destructive, violent, or sexually promiscuous behavior. Music may psychologically influence certain adolescents, and adolescents with particular psychological issues may choose certain types of music. The important questions to ask before drawing any conclusions about the effects on an individual adolescent are: "Which music?" and "Which adolescents?"

Censorship of rock music and music videos does not seem to be warranted based on the studies to date.[1,37] Nor does the U.S. Supreme Court seem likely to tolerate such censorship: In October 1992, it let stand lower court rulings that declared the heavy metal rock star Ozzy Osbourne's free speech rights protected him against lawsuits brought by the parents of two teenagers in Georgia and South Carolina who had committed suicide after listening to his song, "Suicide Solution" (*Albuquerque Journal*, October 14, 1992). For the most part, the lyrics are not understood by adolescents to have the negative influences that adults worry about. Teenagers are largely interested in the music itself and themes of interpersonal relationships. For a small minority of teenagers, certain music may serve as a behavioral marker for psychological problems.

While there has been a great deal of concern about the potential negative effects of music and music videos, only a small amount of attention has been paid to how their potential might be used to help young people learn positive or pro-social messages. By studying what has made music videos so successful, we might learn to present health-related messages in ways that increase attention, learning, and ultimately behavior.[35] Possibly this might be done through imaginative visuals and exciting music. Recently, pop songs, music videos and soap operas have been used in developing countries to successfully change attitudes about contraceptive use, premarital sex, and family planning, according to uncontrolled studies.[11] Although news of this success may be overstated, attempts to use these approaches suggest promise.

Further research into the positive and negative effects of music and music videos on adolescent identity formation, health practices, and behaviors is a necessity and should be supported not only by major health and education organizations, but also by the manufacturers, producers, and performers of music and videos.

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Video Games

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Fascination with video games extends across the life span, and adolescents are a major consumer group. This chapter describes how video games have developed into a preferred leisure activity, summarizes research examining the influence of typical leisure play on adolescent behavior, outlines prosocial applications, describes future developments, and presents practical recommendations for current players.

THE DEVELOPMENT OF VIDEO GAMES

The first video game was introduced over 20 years ago. Beginning in 1972, many consumers invested time and money extravagantly in attempts to master the first arcade version of Pong. As arcades became ubiquitous during the 1970s, they provided the perfect arena for the development of an adolescent subculture: parents were excluded, and peer interactions were clearly regulated through a social hierarchy based on skills unrelated to school performance.[30]

When home systems and cartridge games became available, video games became popular across age groups. As concern grew about their possible impact, investigators borrowed paradigms from television research. Research efforts were short-circuited by two events: a conference sponsored by Atari at Harvard University in 1983 and a steep drop in sales caused by market glut. The preliminary results presented at the Harvard conference seemed to emphasize potential benefits, although continuing research was also recommended. Further research seemed less essential, however, as sales declined and video games were dismissed as just another toy fad.

The video game industry recovered in the second half of the 1980s. Provenzo[31] provides an intriguing description of Nintendo's contribution,

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suggesting that Nintendo rekindled interest by offering improved special effects and new game accessories. Nintendo also ignited controversy, however, by using marketing strategies that targeted children and adolescents and by promoting games with violent content. Sega later followed this successful strategy and currently shares Nintendo's success. A second video game conference, supported in part by Nintendo, was held in Louisville in March, 1992. Participants drew conclusions with caution, and interest in empirical work was renewed.

PREVALENCE OF GAME PLAYING

Surveys from the 1980s suggested that most young adolescents played video games.[19] Results of a recent survey conducted by the author[13] suggest that video games continue to be a popular leisure activity for many adolescents in the 90s. The survey was conducted in a mid-sized, midwestern community with primarily middle-class junior high school students. Over 90% of the seventh- and eighth-grade boys and about two-thirds of the girls reported spending some time each week playing video or computer games. Time spent playing games in an average week is presented by gender in Figures 1 (home play) and 2 (arcade play). On the average, boys reported more play in both settings, with significantly more arcade play than girls. These gender and location differences are consistent with past reports.

Study participants were also asked to list their three favorite video games. Using a five-category system of describing primary game content (General Entertainment, Sports, Educational, Fantasy Violence, and Human Violence), over half of the favorite games were classified into one of the two violence categories. This proportion would be even higher if the many sports games with violent themes were included. Educational games were chosen as 2% of favorites. These data not only document the popularity of games with violent themes, but also confirm that adolescents perceive the violent content. Whether this preference for violent games has important implications remains to be determined, but with sales in 1992 projected to exceed $6 billion, systematic study is obviously needed.

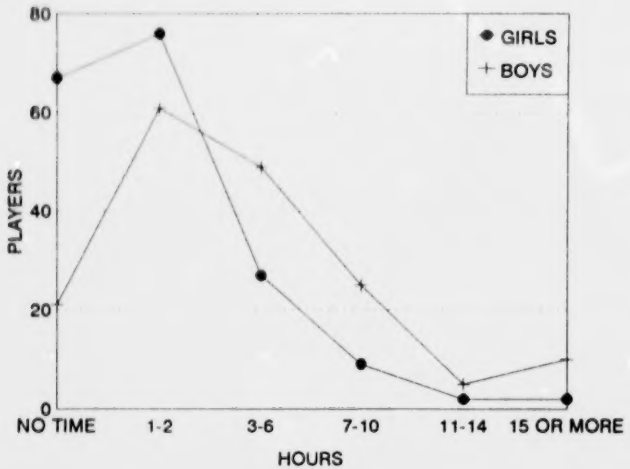

FIGURE 1. Home playing time reported by seventh and eighth graders in a typical week.

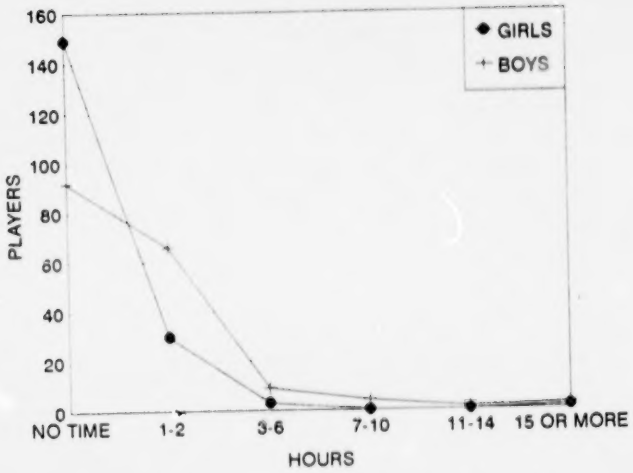

FIGURE 2. Arcade playing time reported by seventh and eighth graders in a typical week.

THEORETIC IMPACT OF VIDEO GAMES

Video games have both advocates and opponents. In general, advocates view leisure play as benignly escapist and cathartic, with the potential to promote a sense of mastery and social acceptance as well as to develop specific skills such as eye-hand coordination. Opponents are concerned that video games will displace more beneficial activities such as homework, school attendance, and even sports; that antisocial behavior such as stealing money to play in arcades may increase; that creativity may be impaired because players must follow preset rules to succeed; and that the violent content of popular games will influence moral and ethical standards and promote aggressive behavior.

Lack of conclusive research leaves the relative validity of these positions unresolved. On a theoretic basis, however, application of the social learning paradigm used in research on the effects of television[5,36] may strengthen the arguments of opponents. Social learning theory suggests that choice of alternate behaviors is most effectively influenced by demonstration (modeling). Both television and video games provide demonstrations of how to solve problems and to cope with life situations. The modeling effect is enhanced if the player identifies with the characters and lacks more compelling real-life models. The influence of video games may be further strengthened by the player's dynamic role in developing the game scenario and by the relentlessly repeated exposure that often chracterizes play.[8,31,34] Theoretically, therefore, video games may influence behavior through a powerful blend of demonstration (modeling), reward (reinforcement), and practice (rehearsal),[3a] enhanced by the dynamic nature of game play and by identification with game characters (Fig. 3).

Given a theoretic potential to influence behavior, the implicit message of video games becomes important.[31] Popular games often encourage behaviors that are not appropriate in everyday life, and realistic consequences for antisocial behavior are nonexistent. Negative stereotypes may be reinforced by the portrayal of women as helpless, brainless victims and by the pervasive "us-against-them" mentality.[31] Many

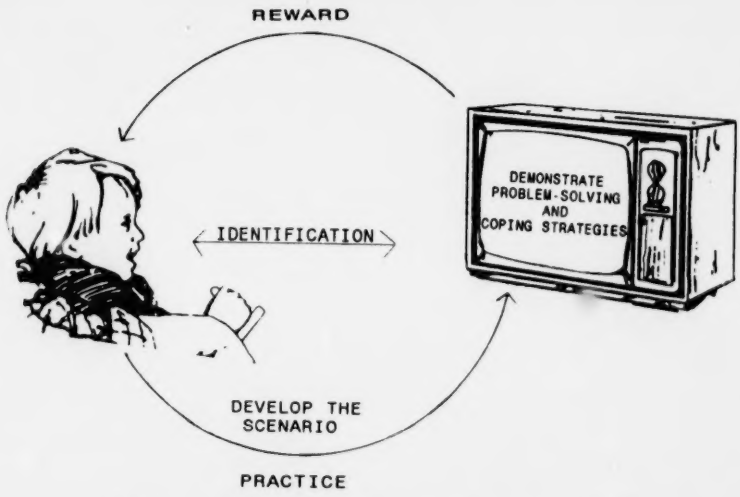

FIGURE 3. The influence of playing video games on behavior.

games are based on a state of conflict that can be resolved only by competition, aggression, or other violent actions; compromise is not an option. This perspective, combined with how closely some games resemble televised displays of genuine attacks, could influence how players comprehend and respond to actual warfare. On a theoretic basis, because these messages and stereotypes are pervasive, concern about how leisure play could influence susceptible individuals may be justified.

RESEARCH FINDINGS

The scientific literature on the effects of playing video games is not yet substantial.[12] Therefore, statistical procedures used to group studies and to minimize the importance of different procedures cannot be used to establish significant relationships. In this section, trends are identified by summarizing representative research that addresses the following questions:

- Why do adolescents play video games?
- Is health affected?
- Will game playing influence eye-hand coordination?
- Does playing video games displace other activities?
- Is school performance affected?
- Do players have particular personality patterns or problems?
- What is the influence of violent content?

Why Adolescents Play Video Games

In a 1984 survey of 244 children aged 10–14 years, arcade play was found to be complementary to watching television, gratifying many of the same needs such as diversion and relaxation.[34] In addition, because players must interact with video games, they seemed to provide what was termed an "electronic friendship" (p. 155).

Skill level influenced male preference for arcade driving games in a 1985 project.[29] Two studies were conducted in a laboratory setting with 48 undergraduates

and 24 9–15-year-olds. Independent of prosocial or antisocial content, players seemed to prefer games that provided a challenge but were not beyond their ability to master.

A 1986 study examined the effect of emotional reactions on game preference.[27] First 58 undergraduates (including 20 women) rated their reactions to 22 popular arcade games. The predominant emotional response was aggression, anger, or hostility. Then 100 undergraduates (including 31 women) were surveyed after playing games in an arcade setting. Game preference was positively related to the "'pleasantness" of the game (based on dimensions such as color and sound), reaction time and general degree of arousal required to be successful, and control over presentation of game features.

Adolescents participating in the 1980 studies played arcade games as a diversion and preferred games that challenged their skill and did not arouse strong negative reactions. This finding suggests that the current popularity of violent games may be more a function of the limited availability of alternate types with equivalent skill requirements and interesting story features than of the violent content.

Health Effects

Concern that playing video games may impair health was raised by the medical community in the early 1980s. A case report in *The Journal of the American Medical Association*[17] described acute arm pain that resolved when the patient stopped using a joystick to play video games with his son. There have been other reports of similar adverse effects, and one common syndrome has been popularly labeled numb thumb.

A potentially more serious condition, called videogame epilepsy, has also been described in case reports. Maeda et al.[25] summarized reports that imply an association between playing video games and a photosensitive epilepsy, triggered by pattern or photic stimulation. Seizure phenomena include generalized tonic-clonic, partial seizure, and headache. Treatment recommendations include refraining from play and administration of sodium valproate for persistent seizures. Although case reports first appeared in 1981, many health professionals lack information about the possible relationship between game-playing and seizures. The video game industry is taking the problem seriously: epilepsy warnings are now included in some instruction pamphlets.

There has also been speculation about the effect of sustained play on heart rate and blood pressure. Mean heart rate was not significantly affected by game-playing in one laboratory study of 56 eighth graders (including 28 girls).[37] In an older population (23 men, aged 22–28 years), minor changes occurred in mean systolic blood pressure and in heart rate during play, and the investigators suggested that certain individuals with cardiovascular disease could experience adverse effects.[20]

Considering the prevalence of play, evidence of serious acute adverse effects on health is rare. Adverse effects are likely either to be quite subtle, relatively minor, and temporary, resolving spontaneously with decreased frequency of play, or to affect only a small subgroup of players. Possible long-term effects, such as the contribution of this sedentary activity to obesity, have not been examined. Existing information suggests that some players will experience acute adverse health effects, with frequent players at higher risk.

Eye-hand Coordination

Repetition, skill refinement, and reward for improved play are central elements of video games. Because visual-motor skills play an important role in success, it seems reasonable to assume that playing video games could lead to improved eye-hand coordination. However, apart from self-report or preliminary, uncontrolled studies,[3,28] evidence of positive impact is lacking.

Ability to track a moving light stimulus with a stylus was the performance criterion in one well-designed study that compared players and nonplayers.[18] Participants were 62 undergraduates (including 22 women), half of whom were video game players. Although players were significantly better at the task, no relationship was found between performance and time spent playing games in an average week or between performance and total length of game-playing experience. Such results leave open the question of whether game-playing attracts individuals with better coordination or creates them. Also open is the question of whether improvement in game performance is a function more of improved understanding of game characteristics and rules or of a true refinement of visual-motor skills. Even if eye-hand coordination improves as a direct result of playing video games, the more significant question of generalization remains to be rigorously examined.

Displacement Effect

The intensity of the typical initial attraction to video games has raised concern that game-playing will permanently displace more beneficial activities. However, investigators consistently report that, although initial interest and frequency of play are high, within about 6 months the pattern of daily activities returns to pregame status for most individuals.[6,7,9,28]

Creasey and colleagues,[6,7] for example, conducted two studies of daily activities before and after purchase of game systems. In the first study,[6] 64 children aged 9–16 years described their playing time, leisure activities, peer interactions, and school performance. The sample was divided into new game owners, owners for a year, and nonowners. New owners reported high frequency of initial playing and a change in other leisure activities, but within 6 months the general pattern of daily activities returned to pregame status. The second study[7] reported comparable results.

Another investigator[9] identified a small group of players who developed and maintained a "compulsive" level of interest in video games, substituting play for academics, sports, and social interactions. Surveys were obtained from 151 10–20-year-olds in arcades (including 10 girls). Although most participants reported that arcade play had a minor role in their lives, some individuals playing more than 12 hours a week in arcades described themselves as "feeling addicted" and "bothered" if play was limited.

Limited research suggests that playing video games does not have a serious displacement effect for most adolescents. In some players who do not habituate, however, playing may become compulsive. Once again, a subgroup of frequent players seems at possible risk for significant adverse effects.

School Performance

Conclusions about relationships between playing video games and school performance have often been based on student self-report.[6,8,10] Not surprisingly, most students report that school performance is not affected by home or arcade play.

Both parent and child perceptions were examined in one study of 20 families with children ranging in age from under 10 to over 14 years.[28] Twelve families reported perceiving no change in school performance as a result of playing games on home systems, and the other 8 families believed that schoolwork had improved. Teacher perception was examined in a study of 189 fourth through sixth graders (including 65 girls).[24] For boys, more time playing arcade games was associated with lower perceived ability in mathematics and lower general academic competence.

Further research using objective measures such as grades and test results is required to determine whether playing video games has an impact on school

performance. Existing data are contradictory, but frequent play seems most likely to be associated with negative impact.

Personality and Psychopathology

When arcades first became popular, a major concern was that playing video games would damage personality development and promote psychopathology. In one of the earliest studies linking video games and adjustment, a personality questionnaire was administered to 280 arcade players (including 79 women), aged 12–34 years.[15] Groups of long-term and new as well as frequent and infrequent players were evaluated on several dimensions, including social withdrawal, hostility, self-esteem, and social deviance. No significant differences related to game-playing habits or to age were found. In another study using standardized measures, more frequent players (290 students in grades 9–12) revealed no increase in conduct disorders or neurotic psychopathology.[26]

In an investigation that included 208 adolescent boys, no differences were found between low- and high-frequency arcade players on standardized personality measures, but higher-frequency play was related to increased guilt about playing and to more reports of problems with police.[22]

Possible relationships between playing video games and self-esteem or self-perception have also been examined, with inconsistent results. Questions about self-esteem were asked as part of a broad survey of game-playing habits.[8] An association was found between frequent arcade play and lower self-esteem in 110 tenth- and eleventh-grade boys. Based on Harter's[21] multidimensional approach, Creasey and Vanden Avond[7] reported that children who played video games had higher scores in perceived athletic competence than nonplayers. The author's work in progress, which also uses the Harter approach, indicates complex negative associations between gender, time and location of play, game content, and several aspects of adolescent self-perception.

In spite of the lack of evidence for a causal relationship between game-playing and adjustment problems for the majority of players, some negative associations, including lower self-esteem, are reported for subgroups of players. Further study is needed to clarify the meaning of these associations and to examine the contribution of other factors.

Violence

A causal relationship between exposure to television violence and subsequent aggressive behavior has been established to the satisfaction of many experts.[5] Most players spend much more time watching television than playing video games, but game-playing adds the element of dynamic involvement to the passive demonstration of television. Some believe that, like television, violent video games may influence players to choose aggressive behavioral alternatives.[31]

Most laboratory research in this area has been conducted with younger children. In 3 studies with participants ranging in age approximately from 4–10 years, playing violent video games led to increased aggressive behavior during free play.[4,33,35]

Results differed in research with 126 second through sixth graders.[16] No difference in subsequent aggresssion was found between children who played or observed violent and nonviolent games. Aggression was measured by a pushbutton apparatus in which the participant could choose to make a "child" in another room win or lose (supposedly by making a control handle hot). In a similar study of 56 eighth graders (including 28 girls), playing violent video games did not increase subsequent aggressive behavior.[37] Aggressive behavior was defined as the amount of money deducted from payment to a "student" (in fact, a computer).

Based on 250 questionnaires completed by tenth and eleventh graders (56% girls), Dominick[8] reported that adolescents who watch more violent television spend more time playing violent games at arcades. In theoretic situations, game players were more likely to choose aggressive behaviors from a group of alternatives. In another questionnaire-based study, hostile affect increased after playing violent games in a laboratory, according to standardized questionnaire responses from 60 undergraduates.[2]

Past research suggests a possible relationship between playing violent video games and subsequent aggressive behavior, at least for younger children in a free-play laboratory setting. It is more difficult to find appropriate short-term behavioral measures for older players, but limited research suggests that, for older groups, games may have fewer short-term effects. Because violent games are extremely popular, future research must assess long-term effects as well as the possible additive effects of regular exposure to multiple sources of violence.

Status of Research on the Impact of Playing Video Games

Research on the impact of playing video games remains preliminary. In addition to design problems such as grouping participants of extremely diverse developmental levels, a large proportion of existing research is based on arcade play. Adolescent interest in arcade play has waned, probably as a function of the availability of home systems and the intrusion of younger children and adults into arcades. Adolescents who played in arcades during the 1980s may differ from current home-system players in important ways.

Some data indicate a subgroup of players for whom video games are not entirely benign. One possibility is that game-playing may become a catalyst for a preexisting problem in vulnerable adolescents. Further research should clarify whether or not certain players are at high risk and whether the risks are more strongly associated with frequency of play, type of game played, individual player characteristics, or a combination of features.

PROSOCIAL APPLICATIONS

Creative prosocial applications of video games can be found in diverse therapeutic and educational programs. For example, playing video games during chemotherapy led to significant reductions in self- and observer-reported anticipatory anxiety and to decreases in posttreatment distress for 3 adolescent boys.[23] To facilitate the rehabilitation of upper-limb burn victims, an exercise program was developed with adapted video game controls.[1] This technique helped to overcome initial resistance to therapy and later encouraged and shaped appropriate movements by providing continuous feedback for the desired performance, while simultaneously offering distraction from pain.

Video games have also been adapted for use in comprehensive programs to develop social skills in children with severe developmental problems such as autism.[14] In education, video or computer games may be more effective than some traditional methods for teaching reading skills to poor readers.[11]

THE FUTURE OF VIDEO GAMES

The popularity of video games seems stable. Declines will be temporary and rapidly reversed by the introduction of new technology and by the maturation of new generations of consumers. Advanced features now offered for home use include

special effect-enhancing multimedia drives, sound boards, and CD-ROM. Prosocial applications will become more widespread if costs decrease. The term electronic games will refer to both video and computer systems.

If costs moderate, the introduction of "virtual reality" technology will revive the popularity of arcade play. This eerie three-dimensional experience, which makes players feel that they are literally in the game, is being introduced in Virtuality centers in both the United States and Japan. Virtual reality is based on advanced combinations of special-effects technology first used by the National Aeronautics and Space Administration.[32] This technology has almost unlimited potential for prosocial applications. For example, physicians may be among the first professionals to benefit from training based on virtual reality.

The Bottom Line: Recommendations for Adolescents and Parents

The majority of adolescents enjoy playing video games, and in some peer groups playing is essential. Most adults and adolescents assume that video games are a benign activity without adverse consequences. Some parents who know the content of popular games are uneasy, but sales figures suggest that uneasiness does not translate into restrictions. Fortunately, the choice of games is large and increasing, and players also choose how much time is spent. Some two-player games even offer unique opportunities for potentially positive interactions.

Data suggest that for some individuals game-playing may not be an entirely benign activity. More research is needed to identify vulnerable individuals and problematic game-playing habits. At this time the most reasonable strategy is for parents to be aware of game content and time spent playing and to discuss choices with adolescents. Limiting play by parental edict is an undesirable option that, however, may be necessary if game-playing interferes with other activities. Computer games, in which violent content is currently less pervasive, provide an alternative to dedicated systems.

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Adolescents, Parenting, and the Media in the Twenty-first Century

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The issue of adolescents, parenting, and the media in the 21st century can be addressed in many different ways. The present chapter highlights the ongoing changes in perceptions of adolescents and parenting that, in all likelihood, will continue into the next century. First, however, the causal relationship between adolescents and parenting on one hand and the media on the other must be understood, because that relationship frames any attempt at understanding both the changes that are occurring and how best to address them.

MEDIA THEORIES

Theories about the effects of the media on adolescents and on parenting often conflict. Perhaps the most intuitive and therefore the most commonly held theory may be called **media determinism.** This theory regards the media as both a causal and a negative influence. Comic books, radio, movies, and television have been accused of corrupting the young and of posing serious problems for parenting. Such claims were never substantiated. Nonetheless, Postman[13] argues that television is bringing about the "disappearance" of childhood, and Winn contents that television is a "plug-in drug"[17] that contributes to a world of "children without childhood."[18] Perhaps the major advocate of media determinism, however, is McCluhan, who argued that the media have homogenized humanity and turned the world into a "global village."[12]

Like economic determinism, however, media determinism is much too limited to account for the diversity of social forces that impinge on adolescents and their parents. An alternative interpretation may be called the **media-mirror** theory. From this point of view, media do not determine adolescent

behavior and morality, nor do they create the attendant parenting problems. Rather, the media are limited to mirroring the prevailing perceptions of adolescents and their parents. From this standpoint, the media are not the cause but simply another effect of the social perceptions and attitudes that corrupt the young and frustrate their parents.

This view of the media is most ardently advocated by certain performers.[8] When a heavy metal rock group such as Motley Crew is accused of being obscene and too lurid for young people, band members argue that they are merely reflecting what is "out there" rather than creating it. It is not their music and lyrics, but society itself that harms youth. In their defense, they point to the corruption in politics and business as more detrimental to the young than lurid song lyrics or risqué music videos.

A third interpretation, widely held among social scientists, may be called **media-society interaction.**[3] This theory asserts that the media not only reflect what is happening in society but also support and strengthen preexisting attitudes and perceptions. According to this perspective, the media *both* reflect and determine society. In the same way, society not only determines the media but is also buttressed by them. It is difficult, if not impossible, to define the extent to which the media affect adolescents and parenting or vice versa. Causal relations in this ongoing dynamic vary with different individuals, with the type of media, and with the social forces operative at any given time.

This chapter approaches the issue of adolescents, parenting, and the media from the interactionist perspective. The past several decades have witnessed a drastic restructuring of society's perceptions of adolescents and of parenting. This ongoing restructuring, which will continue into the next century, is both a determinant and a consequence of media reflections. Changing perceptions of adolescents and parenting and parallel alterations in the media, however, are part of a larger transformation that has affected every institution within society. This larger transformation has been termed the transition from modern to postmodern society.[11]

It is necessary, therefore, to summarize briefly the larger transformation before turning to the specific changes that have occurred in perceptions of adolescents and parenting and to media representations of these changes.

FROM THE MODERN TO THE POSTMODERN FAMILY

The Assumptions of Modernity and the Nuclear Family

Late modernism, which is said to have ended around the middle of this century,[11] was founded on belief in a rational universe and a commitment to individual liberty and freedom. These tenets generated three fundamental assumptions about the nature of the world: progress, universality, and regularity. According to the assumption of progress, social life advanced from primitive savage societies to civilized cultured societies. Social progress was also assumed to be universal; that is, it occurred, albeit at different rates, in all parts of the world. Finally, social progress was assumed to follow a regular, predictable course. Darwin's theory of evolution provided a general paradigm for this conception of universal and regular social progress.

These fundamental assumptions were embodied in the conception of the modern nuclear family, which was viewed as the ideal end-product of a long evolutionary process:

> Social Science developed only one comprehensive theory of family change, one based on nineteenth century evolutionary ideas . . . the theory asserted that in the course of man's development the family had "progressed" from the primitive sexual promiscuity

of a semi-animal horde through group marriage, matriarchy, and patriarchy in some polygymous form, to culminate in the highest spiritual expression of the family, Victorian Monogamy.[7]

The nuclear family—centered on two parents, with one working, one staying home to rear the children, and relatively isolated from the larger society—was regarded as a universally ideal pattern of kinship. It was also seen as the most regular pattern of kinship against which all other patterns must be compared. Single-parent families, two-parent working families, blended families, and adoptive families were seen as irregular and therefore inferior to the nuclear family. In the modern era, the nuclear family assumed moral dimensions and was regarded as the only good structure for healthy childrearing.

The Assumptions of Postmodernity and the Permeable Family

Events of the first half of the twentieth century, however, challenged the basic tenets of late modernism on every hand. The assumption that societies, as they became progressively more civilized, educated, and cultured, also became more humanitarian and less savage is no longer tenable. Two world wars, the holocaust, the atomic bomb, and the continued deterioration and exploitation of the environment have given the lie to the modern concept of unidirectional progress. In the same way, the assumption that social progress is universal, regular, and inevitable was undermined by the different paths followed in countries such as China and Russia and had to be abandoned.

As a consequence of these developments, new beliefs and commitments have gained ascendence. Language rather than reason is now regarded as the basic substrate of knowledge[6] and brings with it a commitment to human diversity. These tenets have generated a new set of assumptions about the nature of our world. Instead of progress we now have the concept of difference. In the modern era, for example, America was viewed as a melting pot in which ethnic, racial, and religious differences would be progressively forged into a new, generic individual—the American citizen. In post-modern America, however, the metaphor of the rainbow has replaced that of the melting pot. We now celebrate difference the way we once honored unilateral progress.

The assumption of universality has also been replaced. In its stead is belief in particularity. The sciences, which continue the search for grand theories, now have a place for micro theories of very limited events. Within psychology, for example, domain-specific principles of learning are now preferred over those that apply to animals and humans alike. This belief is evident elsewhere in society. Henry Ford could say that he did not care what color his cars were so long as they were black. Today cars are varied not only in color, but in many other ways to suit individual tastes. Theaters are now multiplex and show several different movies at once to cater to different tastes. Cable television offers viewers more than fifty different channels. The belief that the media would homogenize and robotize humanity appears unfounded. On the contrary, the media have encouraged particularity, not universality.

Finally, the belief in the healthiness of regularity has been modified by the recognition that much in society is irregular and that irregularity is not the same as bad or abnormal. This change is perhaps most evident in science, which once regarded irregular phenomena as errors of measurement or noise in the system. Einstein reflected this belief in regularity when he wrote that "God does not play dice with the universe." Likewise, Freud took regularity for granted when he argued that even the slightest psychological errors, such as slips of the tongue or pen and forgetting, were determined by unconscious motivations. Today, however, science

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recognizes the legitimacy of chaotic phenomena, such as the weather, that are neither regular nor governed by underlying laws. Indeterminacy is now accepted as a genuine phenomenon rather than a conceptual failure. In social life, too, many "irregularities," such as premarital sex, nonmarried couples living together, and single women choosing to have babies, are now accepted as normal and healthy.

These changed beliefs about the nature of the world have been incorporated into a new conception of the family. The modern nuclear family, described as a haven and refuge from the demands of a cold and unfeeling world,[10] is being increasingly displaced by the postmodern permeable family[4] that serves more as a comfort station for the busy comings and goings of individuals in a hurried society.

The postmodern celebration of difference has deconstructed the idealized and mythologized nuclear family as the best of all possible kinship structures. A variety of different structures that serve to rear children are now acknowledged, if not fully accepted. Single-parent families, two-parent working families, blended families, adoptive families, surrogate mother families, and test-tube baby families now far outnumber the traditional nuclear families in American society. The nuclear family is not now, and perhaps never was, the universal family form.

Furthermore, the nuclear family is often far from a refuge and a haven. The nuclear family can conceal violence, addiction, and extreme sexual and physical abuse. At the same time, many nonregular families can be deeply loving and caring. The people and the emotional climate of the family rather than its regular kinship structure are the critical factors in successful childrearing.

The permeable family differs from the nuclear family in still other respects. The solid boundaries of the nuclear family ensured a clear distinction between public and private, between homeplace and workplace, and between children and adults. In contrast, the boundaries of the postmodern family are highly permeable and connect the family to, rather than isolate it from, the larger society. For example, the public/private distinction has dissolved now that television programs such as *Donahue, Oprah, Heraldo,* and *Sally* make public the most intimate facets of family life. At the same time, public issues such as war, famine, rape, and pillage are brought into the home every day and are woven into private lives.

In a like manner, the distinctions between homeplace and workplace have been all but obliterated. The introduction of personal computers, modems, desktop publishing, and fax machines has made it possible for many people to conduct their business from their residence. Half of the small businesses begun by women over the past 20 years have started in the home. At the same time, more than 4000 companies now have child-care centers located in or near their main buildings. In a real sense the workplace has moved into the homeplace, much as the homeplace has moved into the workplace.

Finally, the concept of wise, mentoring adults who impart their knowledge, skills, and values to the innocent, naive, next generation has also become blurred. Young people today are often more skilled and comfortable with the onrush of new technologies than their parents. Likewise, the need for two-parent working families means that the majority of young children are looked after, for an extending period of time, outside the home by nonparental caregivers. These children, from an early age, live independent lives outside the home, and this independence helps to break down the distinction between parents and children.

MODERN AND POSTMODERN FAMILY TIES

Family ties include the sentiments, values, and perceptions that bind family members to each other. As society moved from the nuclear to the permeable family,

the corresponding family ties have changed as well. Moreover, this change in family ties has been both mirrored and reinforced by the media. This parallel reflection and strengthening of changing family ties (and the derision of previous ties) best illustrates the interdependence of social perceptions and their portrayal in the world of film, television, music, and print.

Modern Family Ties

Sentimental Ties. The modern nuclear family was characterized by the sentimental ties of **romantic love, maternal love,** and **domesticity.**[14] According to the concept of romantic love, each person is destined for a specific ideal partner, and once the two have met, they marry and live happily ever after. The concept of maternal love emerged in the nineteenth century coincidentally with the divestment of the nuclear family of all but its emotional functions. It was encouraged by the drop in infant mortality and by the Darwinian concept that both human and animal mothers had a maternal instinct that made it imperative for them to nest and to care for their infants and young children. Any woman who did not show this instinct was somehow abnormal. Finally, according to the concept of domesticity family members were most tightly bound to one another rather than to people, groups, or activities in the outside world.

These ties were mirrored and idealized in many of the media portrayals of the family in the nineteenth century and in the first half of this century. Romantic novels of the nineteenth century, such as those of Jane Austen,[1] often centered on the sentiments of romantic love, maternal love, and domesticity. In this century, radio programs, movies, and television dramas as well as novels echoed the sentiments of the nuclear family. "Anniversary Song," "My One and Only You," and "Some Enchanted Evening" are but a few of the popular songs that celebrated romantic love.

Perhaps the best example of the media portrayal of such sentiments is the film "It's A Wonderful Life," directed by Frank Capra and starring James Stewart and Donna Reed. It is now shown on national television every year at Christmas time. Stewart plays a young man who forgoes his ambitions to take over the family business, a savings and loan firm. He marries his childhood sweetheart, Donna Reed, and they soon have two children. His wife stays home to rear the children and to provide support and nurturance. It is a touching portrayal of romantic love, maternal love, and domesticity. When Stewart is about to lose everything, his friends in the community contribute their savings so that the savings and loan firm does not have to fold. The values of the nuclear family are rewarded and reinforced as well as mirrored.

Perceptual Ties. Perceptual ties include the perceptions of parents, children, and adolescents that mediate interactions with family members as well as with the larger society. These perceptions derive from the character of the family's sentimental ties. Romantic love, maternal love, and domesticity were thought to be natural, inborn sentiments that are part of the human endowment. Parenting, therefore, would also be seen as an unlearned, intuitive set of skills. The childrearing literature reflected this perception, as the following quotation from Benjamin Spock illustrates:

> Don't take too seriously all that the neighbors say. Don't be overawed by what experts say. Don't be afraid to trust your own common sense. Bringing up your child won't be a complicated job if you take it easy, trust your instincts, and follow the directions that your doctor gives you. We know for a fact that the natural loving care that kindly parents give their children is a hundred times more valuable than their knowing how to pin a diaper on just right or how to make a formula expertly.[15]

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Given basic knowledge about child development, well-meaning parents intuitively do the right thing.

Nuclear family sentiments also dictated the modern perception of adolescents and their portrayal in modern media:

> The adolescent presumably is engaged in a struggle to emancipate himself from his parents. He therefore resists and rebels against any restrictions and controls they impose upon his behavior. To facilitate the process of emancipation, he transfers his dependency to the peer group whose values are typically in conflict with those of his parents. Since his behavior is now largely under the control of peer group members, he begins to adopt idiosyncratic clothing, mannerisms, lingo and other forms of peer-group fad behavior. Because of the conflicting values and pressures to which the adolescent is exposed, he is ambivalent, frightened and unpredictable.[2]

Modern films, such as the Andy Hardy series, depict a young man who frequently gets into trouble because of his rebellion, overattention to peer group, and just plain inexperience. His guardian, the judge, provides sound and sage guidance. TV sitcoms, such as *My Three Sons* and *Ozzie and Harriet*, also portrayed adolescents who got into youthful scrapes and had to be helped by intuitively knowledgeable, moral, and caring adults. Adolescents were not portrayed as sexually active, as using drugs, or as having a distinctive youth culture in which explicit violence, sex, and substance abuse were accepted as the norm. On the contrary, the media reflected and reinforced the modern perception of teenagers as immature and in need of adult guidance and direction.

Postmodern Family Ties

Sentimental Ties. The ideal of romantic love was turned to rubble by the sexual revolution of the sixties when premarital sex became socially acceptable and commonplace. Romantic love assumed that all young people (particularly women) saved themselves for their future mate. Now that premarital sex is the norm, this aspect of romantic love has all but disappeared. Likewise, the ease, availability, and social acceptability of divorce has undermined the romantic commitment to a single relationship. Romantic love has been replaced by what might be called **consensual love.** Couples have a relationship by mutual consent, without necessarily binding commitments. Concepts such as serial monogamy, safe sex, and prenuptual agreements reflect consensual rather than romantic love.

With the movement of large numbers of mothers into the workforce, the sentiment of maternal love has changed as well. It is now recognized that women can love their children and still want to pursue a career. As a result, a new sentiment regarding childrearing has emerged—shared parenting. Childrearing is no longer the sole responsibility of the mother. The father and nonparental caregivers must also be involved. The recent passage of the ABC (Action for Better Childcare) bill, which provides support for out-of-home child care, is the government's recognition of this new sentiment of shared parenting.

Finally, the nuclear sentiment of domesticity has given way to the postmodern sentiment of **urbanity.** Thanks to the permeable membranes of the postmodern family, even young children are exposed at an early age to all facets of society. Television graphically depicts events occurring in all parts of the world and brings famine, war, and terror into the living room. At the same time viewers are able to visit museums, to attend concerts, and to explore oceans, deserts, and mountains without leaving the comfort of home. Moreover, because of modern jet travel, visits to other countries and experience of other cultures has become fast and cheap. The

postmodern, permeable family is necessarily more urbane than the modern nuclear family.

The media have both mirrored and reinforced this change in family sentiments. Contemporary television programs and films convey the sentiments and values of the permeable family in much the same way that the programs of the fifties and sixties conveyed the sentiments and values of the nuclear family. Both the long-running *Love Boat* and *Hotel* were paeans to consensual love and recreational sex. Shared parenting is also a common theme in contemporary television dramas. In the long-running sitcom, *Who's the Boss*, for example, a male is the housekeeper and nanny. A similar arrangement is depicted in *Murphy Brown*. The urbanity of the permeable family is echoed in the frequency with which the shows deal with topics such as AIDS, drugs, abuse, and deviant behavior. These media portrayals both reflect and reinforce the sentiments of the permeable family.

Perceptual Ties. The new sentiments of consensual love, shared parenting, and urbanity frame a new set of perceptual ties. In keeping with these sentiments, which suggest learning rather than intuition, parenting is now regarded as what Ellul[5] calls **technique.** Techniques are skills acquired to accomplish a particular task. This new perception of parenting is reflected in the print media, particularly in the parenting literature. Whereas modern pediatricians, psychiatrists, and psychologists emphasized knowledge about child development and intuition, their postmodern counterparts underscore learned techniques. Often they are quite specific in the advice they give to parents:

> To communicate information, especially in heated situations, use I messages. An I message explains how you feel without attacking the other person. It is appropriate in situations where outlasting will preserve long range goals of presenting information and maintaining open channels of communication.
>
> If a teenager says, "Geez Dad, I'll mow the lawn. You don't have to be such a conehead about it," an appropriate I message would be, "I feel angry (frustrated, hurt) when I get called a conehead. It makes me want to return the anger (frustration, hurt)."[16]

Parenting as a technique is also mirrored and reinforced by columns in daily newspapers and in weekly and monthly magazines that offer advice to parents. Much of this advice is by way of technique. The postmodern "how-to" approach to parental counseling is far different from the "emotional support" approach of modern writers.

The perception of adolescents has changed in tandem with the perception of parenting. Postmodern young people are perceived as sophisticated, as knowledgeable about sex, drugs, crime, and popular music. This new perception of teenagers is evident in media portrayals. Teenagers now play vamps in the daily soap operas. In a sitcom such as *Married with Children* the daughter is depicted as a tramp who is continually encouraging her young teenage brother to become sexually active. In the film *Risky Business* a high school student turns his parents' home into a bordello over the weekend. Some of the music videos watched by teenagers are often explicitly sexual, rapturous about drug use and, not infrequently, abusive and violent.

The interaction between the media and perceptions of parenting and adolescents is again evident. Although perceptions and their reflection in the media reinforce one another, they do not cause one another. Rather, the causes lie in the changes in society in general and in the family in particular.

CONCLUSION

This chapter argues that the media reflect and buttress the prevailing perceptions of adolescents and parenting and suggests that the perceptions of adolescents and

parenting are determined by many different social forces that affect all institutions within the society. Moreover, the media are but one of the many social institutions that both mirror and reinforce the perceptions of adolescents and of parenting. The schools, the legal system, and the helping professions also reflect and support the prevailing perceptual ties.

This chapter also suggests, at least between the lines, an evaluation of the modern and postmodern perceptions of parenting and of adolescents. The modern perception of adolescent immaturity clearly served modern youth better than the perception of sophistication serves postmodern youth. This position is not an indictment of the postmodern and a nostalgia for the modern. Postmodernism corrected many injustices created by modern perceptions of parenting and has provided parents with many more options than the modern era. Moreover, adolescents probably are more sophisticated than the modern perception of immaturity allowed.

Nonetheless, the postmodern liberation of parents has not been accompanied by parallel creation of new social agencies to provide the security, protection, guidance, and direction required by children and adolescents. Indeed, the new perception of adolescents as sophisticated has led to the widespread abrogation of society's responsibility to young people. Adult society no longer accepts the responsibility to set the standards, to provide the models and to establish the limits so badly needed by adolescents. As a result postmodern youth fare worse, by virtually every measure, than modern youth.[9]

We cannot turn back the clock (nor should we want to do so). We cannot change the situation by censoring the media, which are but another symptom of the problem rather than its cause. Fortunately, however, perceptions can be changed. The recognition that parenting requires knowledge of child growth and development as well as technique is increasing along with the understanding that adolescents are growing in sophistication but not fully mature. We can modify these perceptions and the family sentiments that generated them. We need to rid ourselves of modern and postmodern sentiments and perceptions that have not worked and to retain those that promote the welfare of both adolescents and parents.

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Television and School Performance

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Television and school—what two institutions could be more at cross-purposes? Year after year, politicians, parents, teachers, and the press decry the decline of American education, the dropping of test scores, the decay in basic skills; and year after year, we spend more and more time watching television. The number of high school dropouts and functionally illiterate graduates continues to rise; meanwhile, we use remote controls to switch back and forth between more and more cable channels and digital stereo VCRs on ever-sharper and larger screens. Students no longer read or do homework, we are told, and they spend more time watching television than in the classroom. How could the negative impact of television on school performance be any more obvious?

The actual situation, however, is not so simple. The question of whether television harms, helps, or has no effect on school performance is a longstanding debate and has engaged researchers since the medium was in its infancy. It is one of the most recurrent issues in the struggle to understand how television affects individuals and society. Yet, even though a great deal of research has been done, there is remarkably little consensus among scholars—and a great deal is still unknown.

The lack of consensus was vividly demonstrated at a November, 1992 conference on "Television, Children, and Education," held at the Annenberg School for Communication at the University of Pennsylvania. The conference brought together about 30 leading national and international researchers from psychology, communication, education, and related fields, with two purposes: (1) to assess the current state of scientific knowledge about television, children, and education, and (2) to chart out directions for future research, based on current knowledge. Unfortunately, despite the best efforts of the conference organizers, agreement on

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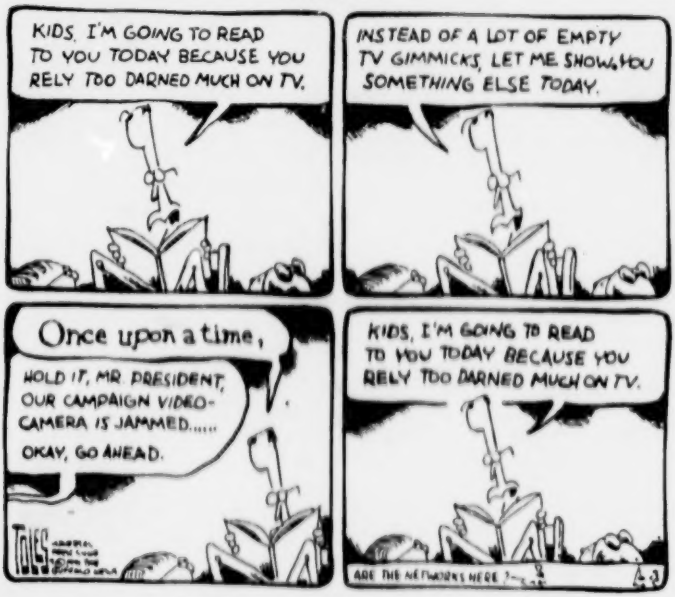
KIDS, I'M GOING TO READ TO YOU TODAY BECAUSE YOU RELY TOO DARNED MUCH ON TV.
INSTEAD OF A LOT OF EMPTY TV GIMMICKS, LET ME SHOW YOU SOMETHING ELSE TODAY.
Once upon a time,
HOLD IT, MR. PRESIDENT, OUR CAMPAIGN VIDEO-CAMERA IS JAMMED.....
OKAY, GO AHEAD.
TOLES
KIDS, I'M GOING TO READ TO YOU TODAY BECAUSE YOU RELY TOO DARNED MUCH ON TV.
ARE THE NETWORKS HERE ?

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"the current state of knowledge" was so negligible that the issue of goals for future research was barely addressed.

Anyone who turns to the research—or to a review of the literature, such as this chapter—with the expectation of either a simple or a consistent answer will be quickly disappointed and dismayed. Available research presents a maze of conflicting findings based on studies of extremely varying quality that use widely divergent methods, measures, and samples. Recent reviews have even reached different conclusions after evaluating the same studies.[2,6,11] One can find a study on television and schooling to support whatever position one favors.

The number of studies conducted since the 1950s is too vast to permit a comprehensive review. Moreover, the research has become much more sophisticated and intricate in the past decade or so, with a greater reliance on advanced statistical techniques and with ever more complex and highly specific findings. This chapter, therefore, attempts to provide only broad brushstrokes around the major findings and current theoretic models, while acknowledging that the actual research raises a daunting array of extremely technical methodologic and analytic details not discussed here. The chapter also emphasizes studies of adolescents (even though research on younger children is clearly relevant). Studies of television produced for educational purposes and studies of the effects of such programs as *Sesame Street* are also omitted. The chapter draws on and attempts to update and extend the conclusions offered by previous reviews in the field.[2,6,11,25,33,35,37]

HISTORICAL BACKGROUND

Concern about the negative effect of new communication technologies on education is nothing new. Literacy itself has always had "divisive and unifying

CALVIN AND HOBBES

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potentials,"[43] and it is worth recalling that the emergence of printing caused an uproar in Western Christendom.[15] The arrival of the printing press made educators fear for the downfall of education as it was then known; teaching the masses to read was supposed to undermine memory skills and subvert the established (oral) techniques of education.

Not so long ago, the habit of reading fiction posed a pervasive and insidious threat. In 1879 a Miss M.A. Bean warned of "The Evil of Unlimited Freedom in the Use of Juvenile Fiction"[5] and asked:

> What other result can be expected when three-fourths of our pupils average a library book per day, which they claim to read through? What wonder that we have yet to learn of the boy or girl who can devour half a dozen books per week and yet retain rank number one on the school record? It is easy to see that this mental process, repeated day after day, is not going to produce a generation of thinkers or workers but rather of thoughtless dreamers.

If we substitute "watching television" for "reading books," the above sentiment seems strikingly familiar and contemporary. Now, of course, it is the practice of reading books that we value for its presumed educational benefits, whereas we fear that television may undermine reading and other academic skills. Earlier in this century, the exact same attacks were directed at movies, radio, comic books, and any other medium that adolescents use heavily.

But television is different from earlier media. The amount of time spent in viewing and the extent to which it permeates daily life are historically unprecedented. Television is not an occasional intruder but an around-the-clock member of the family, from birth; most parents of today's teenagers have themselves grown up with televison. New technologies such as cable and VCRs have increased the amount of time devoted to watching; upcoming developments such as interactive video, high-definition television, fiberoptic video dial-tone services, and 500-channel cable systems should boost exposure even further. Although adolescents spend less time watching television than do other age groups, they are still quite heavily exposed—they watch between 20 and 25 hours a week, according to most estimates. With so much exposure, it is not unreasonable to assume potential consequences.

DIMENSIONS OF CONCERN

Popular books and the press provide ample ammunition to bolster the commonly held view that television is turning children and adolescents into brain-dead

"videots." Conventional wisdom asserts that we are raising a generation of "couch potatoes" who are addicted to television and who watch it in a numbed, zombielike trance. Veteran teachers complain about new crops of bleary-eyed students with low attention spans, whose frames of reference seem entirely determined by television.

More than anything else, the sheer amount of time adolescents spend in watching gives rise to concerns that television must be having a negative impact on their school performance. The primary concern is that heavy television viewing interferes with or displaces other activities that would be more beneficial intellectually. The assumption is that, were it not for television, teenagers would be spending more of their time reading, doing homework, and engaging in other positive activities that would enhance, rather than detract from, their progress in school.

Television could adversely affect cognitive development and school performance in many ways other than displacing the amount of time students might spend on more worthwhile pursuits such as reading. The large amount of time spent in front of the television, coupled with the relatively unchallenging intellectual level of most programs that adolescents watch, generates a panoply of fears among educators, parents, and public officials, including the following:

- Television induces cognitive passivity, so that students devote less effort to schoolwork that is challenging or demanding.
- Television stifles creativity and imagination.
- Television's rapid pace shortens attention spans, making students uninterested in education that is less entertaining.
- Television lowers perseverance and increases impulsivity, making students restless and impatient in the classroom.
- Television cultivates visual processing skills that are incompatible with or obstruct the print-based skills needed for educational success.
- Television increases apathy and leads students not to care about their school performance.

Although teenagers undoubtedly learn a great deal from what they watch, very little, if any, of this knowledge is likely to be particularly useful in school. Moreover, the way that fictional programs portray education, schools, and teaching is mostly degrading and demeaning; this may reduce interest in school and lower the value students place on education. Some have even attributed improper brain development to excessive viewing.[45]

Clearly, the potential for negative impact is vast. When we turn to the actual research, however, the situation becomes murky and complex. In general, the research to date falls into two general categories: (1) studies that explore the cognitive and psychological mechanisms and processes by which television could hypothetically affect academic learning and performance (mostly experiments), and (2) studies that assess whether amount of television viewing and student achievement are in fact systematically related in some way (mostly survey methods).

Experimental studies are not discussed in detail in this chapter, because they are mostly based on younger children and because the effects of television on schooling are likely to stem from long-term, cumulative exposure. These studies, however, are useful for testing hypotheses about what cognitive processes may be involved in any deleterious effects. Several reviews are available.[2,11] This chapter focuses on attempts to determine whether television is in fact implicated in lower achievement among adolescents.

Before-After Studies

From the beginning, studies of television viewing and school performance have produced mixed and conflicting results. The earliest studies compared the academic

skills of students from homes or communities without television and students to whom television was available or observed what happened when television was first introduced.

One early study[21] followed a small sample of 67 sixth graders over 3 years and found no significant differences among those who owned television sets at the start of the study, those who got sets during the study, and those who did not have them throughout the study. Another early small study found no differences in grades between students who did and did not have television.[14] A more elaborate project found that younger students in homes with television had a vocabulary advantage over those without television until about the sixth grade.[40]

Pre- and postownership studies have been conducted in many other countries over the years. In England, nonviewers were found to have slightly but not significantly better marks than viewers;[22] this difference may have been underestimated because, despite matching, nonviewers came from more socially and economically deprived households.[6,24] In Japan, the introduction of television was accompanied by a decline in both reading skills and time spent on homework, especially for fifth- to seventh-grade boys.[17] In Finland, no apparent differences in vocabulary skills were found among elementary school children in areas with and without television.[28] In Venezuela, a study of 10,000 high school students found that those who owned televisions scored higher in language and mathematics.[19]

A study conducted in El Salvador followed three cohorts of seventh to ninth graders over 3 years and found "a striking negative association" between the acquisition of a television set and long-term growth of reading skills.[24] Students whose families acquired television during the course of the study advanced in reading ability at significantly lower rates than those who either never got sets or had them all along. Access to television involved a slowing in the development of reading ability in all three cohorts.

Although the ability to conduct such before–after studies has all but disappeared, an important and fortuitous "natural experiment" was carried out in three Canadian towns in the 1970s: Notel, which had no television but was about to get it soon; Unitel, which received one channel; and Multitel, which received several channels.[12] All three towns were studied before and after television came to Notel. In the first phase of the study, before television came to Notel, second and third graders in Notel had better reading scores than children in Unitel, who in turn read better than children in Multitel. Two years later, after Notel received television, the Notel advantage in reading ability had disappeared. No differences were found for eighth graders in cross-sectional (single time point) analyses. Yet, when the data were examined over time, the results were the opposite: no differences were found in the younger grades, but over the two years of the study the eighth graders in Notel showed less progress in reading than their peers in Unitel and Multitel. Despite these patterns, the study produced many conflicting and contradictory results.[2,11]

The overall results of before–after studies are suggestive but inconclusive. Many suffer from severe flaws in design, such as a lack of control for social class; if those who acquired television sets did better in school, it may have been due to economic factors. The more carefully executed studies suggest that acquisition of television has some negative impact on cognitive growth, at least in the first two years of ownership, but there is sufficient ambiguity that different reviewers of the studies come to rather different conclusions.[2,6,11]

Even if the findings were consistent (and they are not), they would not reveal much about what is going on in the United States today. In the first place, it is unclear how much can be generalized from studies of relatively isolated rural communities or studies from other countries. Most of all, however, it is difficult to see

how these studies can illuminate the consequences of television in a society in which the medium is ubiquitous and omnipresent from birth and viewing levels are much higher. Early studies may reveal something of historical interest about relatively short-term responses to the novelty of introducing television to a home or community, but television is certainly no novelty to adolescents of today.

SURVEY STUDIES

Many studies conducted in the 1970s and early 1980s attempted to determine whether amount of viewing was correlated with achievement levels. Some used small, nonrandom samples of as few as 80 students,[29,42] whereas others used large samples of up to hundreds of thousands of students.[1,9,10,26,36] Many different standardized tests were used, as well as grades in school. Amount of television viewing was measured in a wide variety of ways, from diaries or logs kept at home and program checklists to self-reported estimates of hours of viewing on an average day, yesterday, or even last night. Some examined elementary-age children, some focused on the middle grades, and some analyzed high school students. The wide variety of samples, designs, methods, and measures means that the results are not likely to be an artifact of the limitations of any single approach, but it also makes comparisons across studies more difficult.[25]

Studies of younger children in particular have reported many conflicting and inconsistent results.[25,33] Studies of students beyond the fourth grade and into high school, however, have been on the whole remarkably consistent. With a few minor exceptions, **survey studies of adolescents have consistently found negative correlations between amount of television viewing and school performance,** in particular reading ability.[2,6,11,25,33,37,44]

The vast majority of correlational survey studies of the past 20 years firmly demonstrate that adolescents who spend more time watching television are more likely to get lower scores on achievement tests. There can be no doubt or disagreement whatsoever about the consistency of this finding, across dozens of studies and tens of thousands of adolescents all over the country. Although most correlations are negative, they tend to be fairly small, for at least three possible reasons:

1. Small correlations may accurately reflect a relatively small effect. Some argue that the apparent effect is so weak that even if it truly exists, it is trivial and irrelevant; but accumulated from large populations and over long periods of time, small effects can have profound and far-reaching consequences.

2. Small correlations may be masking a nonlinear association; the statistical measures used in many studies reflect only the degree of linear relationship between the variables and do not reveal whether any curvilinear patterns exist.

3. Small overall correlations may be obscuring a variety of distinct effects among subgroups. Some types of students may be particularly susceptible to negative effects of television on achievement, whereas for other groups greater viewing may have positive outcomes.

If heavy viewing goes with lower scores for some students but with higher scores for others, and/or if the relationship is partly curvilinear, then the effect for the sample as a whole will appear to be minimal. Clearly, these possible explanations are not mutually exclusive, and they all may be occurring simultaneously.

For younger adolescents (roughly sixth through eighth grade), many studies find a curvilinear association.[1,6,16,36,41,44] The pattern is one in which the students who watch relatively low amounts of television per day (e.g., an hour or so) get higher scores than students who watch no television at all. Scores are slightly lower at

medium to higher levels of viewing and substantially lower among the heaviest viewers. Differences in the measures used across studies make it difficult to specify what counts as heavy viewing in absolute terms, although it seems safe to say that those who watch over 30–35 hours of television a week show the worst performance levels by far (Fig. 1).[11,44]

Young nonviewing adolescents are an unusual breed, never more than 5% of any sample; that their scores can be lower than even light viewers may reflect a generalized lack of interest or other anomalies. In any case, the curvilinear pattern disappears with age; older adolescents tend to show monotonic negative associations.[11,36] The pattern of a gentle curvilinear association for younger teenagers and a more linear negative association for older adolescents is extremely consistent (Fig. 2). At all stages of adolescence, however, those who watch a great deal of television do worse by all measures of achievement.

This finding is, nevertheless, open to different interpretations. A small negative association between amount of viewing and achievement scores does not mean that television viewing actually lowers performance for two primary reasons: (1) the apparent association could result from a third factor (or factors) that affect both amount of viewing and achievement (i.e., the relationship could be spurious), and (2) heavy viewing could be a symptom rather than a cause of poor achievement. Both possibilities are discussed below.

The Question of Spuriousness

The observed association may be spurious, with some other factor as the true cause of both greater viewing and lower scores and with no independent impact of television viewing on performance. The two most likely sources of spuriousness are socioeconomic status (SES) and mental ability (usually measured by IQ). Both of these affect amount of viewing, parental control of television, orientation toward

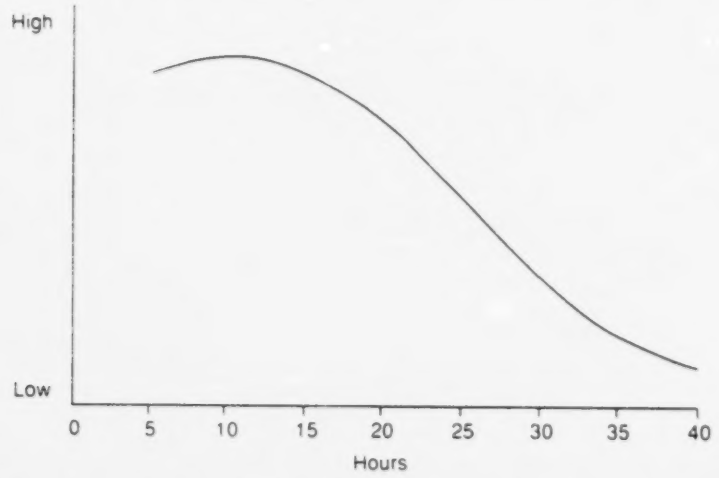

FIGURE 1. Estimated relationship of achievement to weekly hours of televiewing. (From Williams P, et al: The impact of leisure time television on school learning: A research synthesis. Am Educ Res J 19:19, 1982. Copyright 1982 by the American Educational Research Association. Reprinted by permission of the publisher.)

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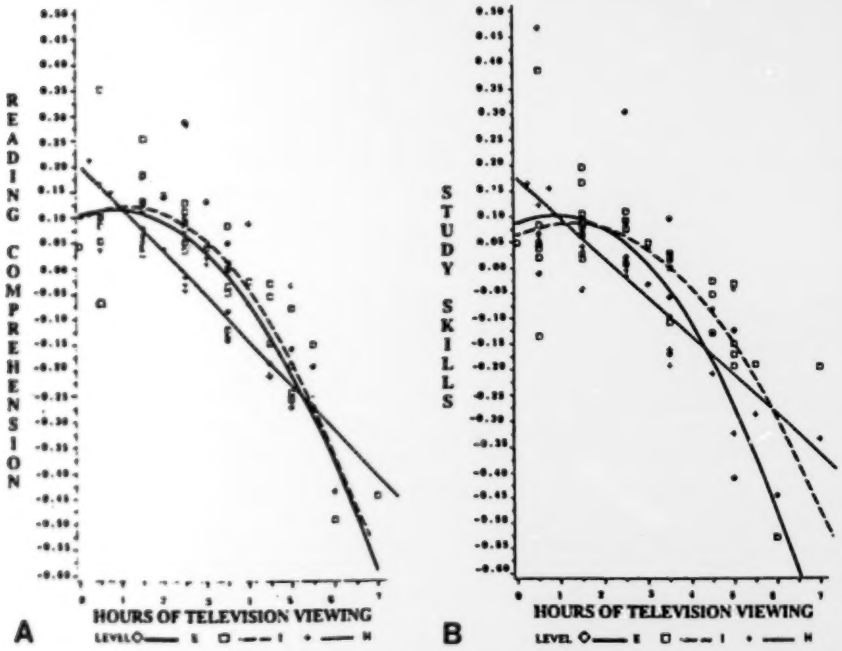

FIGURE 2. *A*, Relation between television viewing and reading comprehension for all statewide assessments combined. *B*, Relation between television viewing and vocabulary for all statewide assessments combined. E = elementary students, I = intermediate-grade students, and H = high school students. (From Neuman SB: The displacement effect: Assessing the relation between television viewing and reading performance. Reading Res Q 23:414, 1988, with permission.)

education, study habits, and other factors that can enhance or undermine achievement. Thus, heavy viewers tend to have lower IQs and to be of lower social status; those with lower IQ and those from lower SES backgrounds tend to do worse in school The apparent negative association between amount of viewing may be an artifact of these (or other) factors.

In general, most studies have found that controlling for SES does not reduce the negative relationship between amount of viewing and achievement. On the other hand, the relatively few studies that have controlled for IQ tend to find that IQ reduces or even eliminates the association.[6,33] Two studies, however, are exceptions. The first found significant negative relationships even with IQ controlled, but only among the heaviest viewers.[38] The second found that scores on tests of reading comprehension and language usage and structure remained significantly and negatively related to amount of viewing even with IQ taken into account, although associations with other achievement areas were eliminated by the IQ control.[32]

Nevertheless, even though mental ability accounts for most of the apparent effect of viewing on school performance, the issue is not so simply settled. On the contrary, strong negative relationships between amount of viewing and achievement have been found among students with higher IQs, and in some cases heavy viewing correlates with higher scores for students with lower IQs[32] (Fig. 3). The result is that

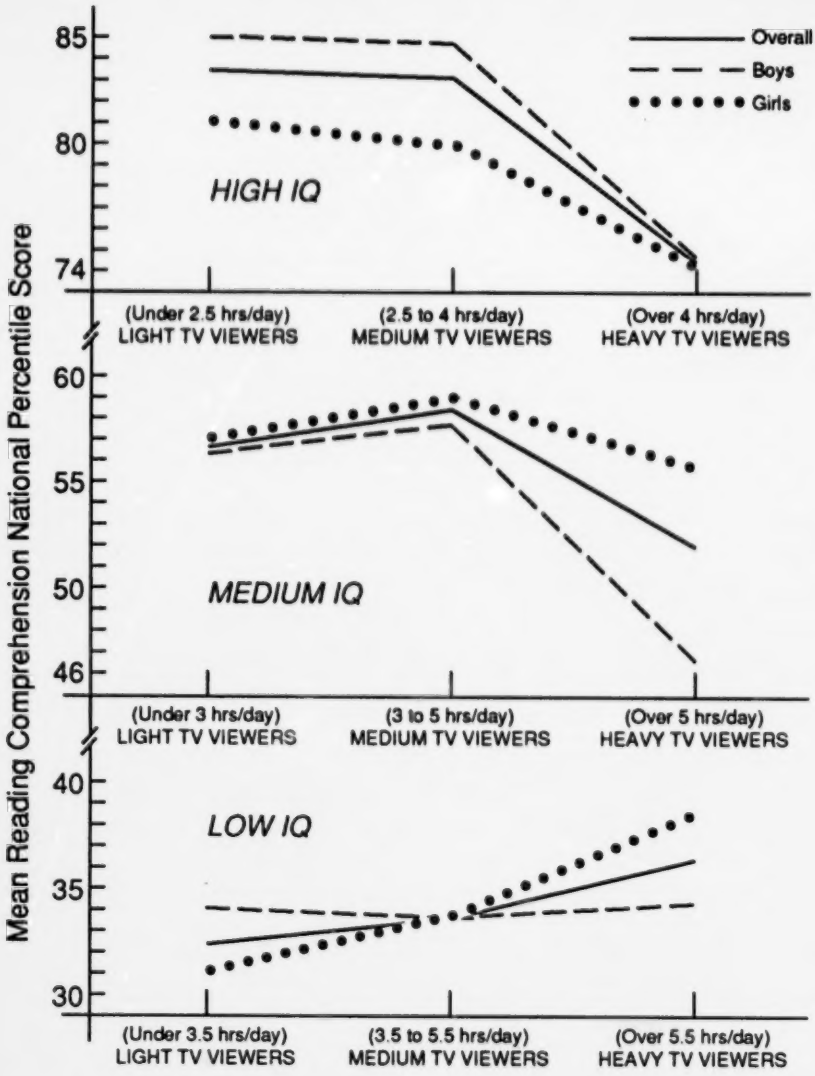

FIGURE 3. Relationship between amount of viewing and achievement varies by IQ and gender. (From Morgan M: Television viewing and reading: Does more equal better? J Communication 30(1):159, 1980, with permission.)

heavy viewing is most likely to correlate with lower scores for high IQ students, and the heavier viewers in each IQ group have scores that are closest to the midpoint of achievement.

Similar patterns of convergence, based on social class instead of IQ, have been found in large-scale studies.[1,16,41] More viewing time correlates with lower achievement

scores for students of higher SES and sometimes with higher scores for students of lower SES.[6] The negative relationship is also stronger among students whose parents are more educated.[27] In other words, heavy television viewing seems most strongly associated with lower achievement among the more socially and intellectually advantaged students.[11]

Many other factors have been found to make a difference in the viewing–achievement correlation. Stronger negative associations have been found for students whose parents are less involved in their viewing, for students who argue more often with their parents about television, and for students who are less integrated into peer groups.[31]

Altogether there appears to be no single effect of television on academic achievement that operates in the same way for all (or even most) students. Most associations are negative, but a few are positive (e.g., for relatively disadvantaged students), and some are curvilinear. The primary conclusion to be drawn is that complex interactions of gender, IQ, age, social class, specific area of achievement being examined,[33] and a whole range of personal, social, and family variables strongly influence the patterns of association. Exactly what programs are watched can also make a difference.[6,11,34,38,42] The studies provide no convincing empirical evidence for widespread, dramatic, or universal impacts, but on the whole they support the view that adolescents who watch heavy amounts of television tend to do worse in school.

Direction of the Effect

Even if the relationship persists in some form under controls for other factors, the chicken-egg problem of the direction of the effect remains: simply demonstrating that heavier viewers tend to get lower scores does not establish that scores are lower as a result of television viewing. Heavier viewing may result from doing poorly in school rather than the reverse. Since surveys provide only a snapshot frozen in time, they cannot reveal whether heavy television viewing is the cause or the effect of lower achievement—or (another plausible possibility) whether both amount of viewing and school performance mutually affect each other over time.

To compensate for this drawback, some recent studies have used panel designs, in which the same students are followed over time. In principle, panel studies are a vast improvement over simple one-time surveys, because they may reveal whether television viewing indeed detracts from school performance over time.

Three panel studies have been published since the mid-1980s. All three report strong and clear negative associations in the same-time data, but when the data are examined longitudinally, all three also report no evidence of a causal contribution of television viewing to lower achievement over time. But problems and limitations with each of these studies may invalidate their conclusions.

Gaddy[18] used data from a large study called "High School and Beyond," based on representative samples of 30,263 sophomores and 28,465 seniors drawn in 1980. He analyzed data from random samples of the 20,308 sophomores for whom follow-up data were collected 2 years later in 1982. The subsamples ranged in size from 2,565 to 5,074 students. He found that amount of viewing in 1980 had no impact on achievement scores or grades in 1982 when a broad range of variables were simultaneously controlled. In addition to controlling for 1980 achievement scores, he also controlled for sex; race; hispanicity; private school attendance; academic program; father's and mother's education; family income; number of siblings and parents at home; availability in the home of a daily newspaper, encyclopedia or other reference

books, more than 50 books, a private room, and a pocket calculator; time spent on homework; how often homework is completed before class; absenteeism; tardiness; frequency of reading for pleasure; and frequency of reading the front page of a newspaper.

As Comstock and Paik[11] point out, however, the use of so many controls (some of which may themselves be consequences of heavy viewing) strongly stacks the deck against finding any significant effect. In particular, because earlier achievement levels are controlled, any effect must be limited to change in achievement levels between 10th and 12th grades, a period in which not much change in skills would be expected. Thus, the tiny negative and nonsignificant impact of television is not very different statistically from the effects of other social, media, and time-use variables (although television produced the only negative estimates). Of significance, tests of the opposite causal path—that achievement levels determine subsequent viewing levels—also failed to produce significant effects. Comstock and Paik thus argue that Gaddy's results fail to demonstrate convincingly that viewing indeed has no effect on achievement.

Ritchie, Price, and Roberts[39] analyzed 3 years of data from children who were in the second, fourth, and sixth grades in the first year of the study (1981). Only about half of the original sample remained in the study for all 3 years—75 children in the youngest cohort, 95 in the middle, and 100 in the oldest. Again, cross-sectional analyses showed highly significant negative associations between amount of viewing (measured in several different ways) and reading achievement, especially in the oldest cohort (grades 6–8). Examined over time, however, and controlling for initial reading skills, the effect of television appeared much weaker. When more complex and stringent analytic techniques were used, the over-time relationship all but disappeared completely.

The authors also tested whether a two-step process might be involved; i.e., greater time spent viewing television leads to less time spent reading, which in turn leads to lower achievement scores. Once again, as more sophisticated analytic techniques were used, the evidence for any effect of television became less and less compelling.

The authors note that all of their measures—amount of viewing, amount of reading, and reading achievement—were highly stable and consistent over time; that is, neither viewing levels nor reading skills showed much change. Therefore, as with Gaddy's study, viewing may have shown no effect on change in reading skills because so little change took place; a two-year time frame may be too brief to detect any influence; or television may have its major effect on reading skills—with long-term implications—even before the second grade. Indeed, Burton et al.[8] found a substantial negative association between amount of preschool viewing and first-grade achievement, but the study was based on a small sample of 128 children and their mothers' retrospective reports of earlier viewing.

The third and final panel study, by Gortmaker and colleagues,[20] covers a longer period of time (4–6 years) and a broader age range (1,745 children between 6 and 11 years old in the first wave of data collection and between 12 and 17 years old at the second). The data were collected between 1963 and 1970, however, and may or may not be generalizable to today's youth. The researchers once again found highly significant negative associations between televison viewing and achievement at a single point in time, but no discernible effects over time. Moreover, no differential effects according to social class or age were indicated.

The fact that the data are several decades old need not invalidate the results, but it should be noted that the estimates of early viewing were based on mothers'

reports. Parental reports of how much their children watch have been found to correlate poorly with videotaped observations of children's viewing habits.[2,3] Therefore, at least part of the reason Gortmaker and colleagues found no effect may be that their early viewing measure is deficient. On the other hand, this same measure from the same dataset revealed a significant independent contribution to childhood obesity.[13]

SO, WHAT DO WE KNOW?

We know that adolescents who watch the most television generally have lower grades and lower scores on tests of academic achievement and skills. There is currently no consensus among researchers as to whether this relationship mainly reflects (1) an actual effect of television viewing on school performance, (2) a process wherein lower performance leads to heavier viewing, (3) a spurious association resulting from third factors, or (4) all of the above, operating simultaneously and perhaps to different degrees for different students.

Depending on how one judges its methods, analyses, and findings, research to date indicates either a weak negative effect of television on school performance or no clear or definitive evidence of any such effect. Although alternative interpretations are possible, the choice appears to be between a small negative effect and no effect at all. What is quite clear either way is that television viewing generally does not offer any benefits to academic achievement.

Anderson and Collins[2] reviewed not only the survey research discussed above, but also well over a hundred experiments (mostly with younger children) that focus on many different cognitive processes and mechanisms that may underlie or shed light on any negative impact of television on education. They judge the bulk of the research to be ambiguous, flawed, or indeterminate and conclude that the observed negative correlation is spurious, probably caused by the environment within which children are raised. They argue that "things which cause a child to watch a large amount of television may also cause poor school performance, with little direct role played by television." They also note that the possibility of no effect "may be unpalatable to those who, for a variety of reasons, do not like American entertainment television, but in the absence of evidence to the contrary, it is a possibility which must be seriously considered."

Gaddy[18] argues that the observed relationships are most likely to be an artifact of a variety of personal and social factors that lead both to heavy viewing and lower achievement. Ritchie et al.[39] ask if "perhaps it is time to take more seriously the possibility that the observed bivariate relationship between viewing and achievement is a result of other processes that affect both." Gortmaker and colleagues[20] attribute the absence of real effects more to "selection" than to spuriousness; they believe that the negative correlations occur because those who obtain lower scores during childhood are consequently more prone to become heavier viewers as adolescents. All of these analysts seem to have evaluated the negative-effects hypothesis as objectively as possible, and none of them has a vested interest in demonstrating the absence of effects, as opposed to television industry representatives who have attempted to downplay concerns.[7]

In a review of the same studies (both experiments and surveys), on the other hand, Comstock and Paik[11] point to a "modest causal contribution by television to lesser achievement, with viewing in excess of a modest-to-moderate amount the major factor." They concede that the observed negative correlations are due to a variety of simultaneous influences and processes:

- Amount of viewing declines in the teenage years, but brighter adolescents reduce their viewing levels sooner than other adolescents (i.e., reverse causality).
- Factors such as lower mental ability, high parental conflict, lower parental emphasis on education, and greater centrality of television to the family impel both greater viewing and lower achievement in school (i.e., spuriousness).
- More viewing at certain key stages often means less time spent on reading and on homework, so that opportunities for the practice and maintenance of reading skills are fewer (i.e., displacement).

The authors do not deny that some portion of the negative correlation can be explained by selection, reverse causality, and spuriousness, but they assert that some of it also reflects a negative effect of viewing on achievement. Beentjes and Van der Voort[6] seem to agree and emphasize conditions (e.g., higher mental ability or heavy viewing of certain types of content) that heighten the risk of an adverse effect on school performance.

Comstock and Paik propose a model whereby television's effects on achievement are primarily indirect, by way of reducing time spent on reading and homework and by increasing the amount of time spent doing homework while watching television. In their view, it is not so much that television takes time away from reading and homework as that reading or homework done while watching is likely to be of lower quality. Television may not compete with homework for students' time because the amount of homework assigned is not that great.[26] Some have found that background television can reduce reading comprehension and cognitive flexibility in an experimental setting,[4] but others have found that doing homework while watching has a small negative effect on achievement.[16]

In Comstock and Paik's model, heavy viewing also means relatively less exposure to certain kinds of programming, such as news and informational programs, that may enhance school achievement. Curiously, they do not posit any effect of viewing on attitudes toward learning, which is a path by which Anderson and Collins[2] and others[23] claim that television may most clearly depress school achievement.

Thus, regardless of whether we look at the evidence concerning outcomes (i.e., does heavy viewing impair schooling?) or the evidence on processes (by what mechanisms may television be harmful?), we have little to support the idea that television viewing impairs education in any substantial way. In terms of outcomes, we have seen that the small negative associations often disappear under controls (although some evidence suggests that they persist in certain subgroups). Although some studies found that the introduction of television involved a slowing in the rate of skill development, no study has yet found any independent effect of heavy viewing on achievement over time.

Evidence to clarify underlying explanatory processes is no better. The question is, if television impairs achievement, is it due simply to the amount of time spent viewing (displacement), to effects of the technology on cognitive skills, or to specific content? If the impairment were due to displacement, the same results would be expected for any behavior or activity (e.g., sports, music, hobbies) that takes up as much time.[23] The evidence for displacement of reading or studying is mixed at best;[2,11,36] as Hornik[25] put it, "there was not much reading before television, and there is not much now." To complicate the issue even further, heavy viewing may imply greater time spent reading or doing homework in later adolescence.[11,30]

Many plausible explanations exist at the cognitive level. But Anderson and Collins[2] could find no convincing evidence of any school-relevant effect of television

on attention, comprehension, concentration, overstimulation, passivity, right- vs. left-brain specialization, or any other cognitive process or skill.

Overall, then, common sense notwithstanding, we have no conclusive or convincing evidence that television either does or should markedly or consistently harm school performance. Many refuse to accept this possibility; even if a clear negative effect cannot be demonstrated empirically, the idea makes such intuitive sense that it is tempting to say that the failure to document clear effects must lie in the use of research methods and measures that are too crude to detect what should be obvious. Yet no evidence suggests that if heavy viewers were to watch less, they would then spend more time on more constructive activities or that their scores would improve. On the other hand, no evidence suggests that viewing time makes any valuable or beneficial contribution to scholastic pursuits.

The evidence for a negative effect is, at best, quite modest. Does this mean that we can give television a clean bill of health and allow students to watch it as much as they desire, with no concern about its impact on educational development? Absolutely not. To say that little evidence supports the theory that television weakens school performance is not the same as saying that strong evidence indicates that it is not harmful, especially for certain types of students.

Moreover, even to ask whether television causes lower achievement may pose the problem at an inappropriate level: that of the individual student. Individual students do not exist in isolation from family and social contexts. Viewing patterns, study habits, reading habits, orientation to television, and attitudes toward school are strongly influenced by family and peers. Heavy television viewing is both an aspect and an indicator of a broad range of characteristics, attitudes, and practices that include lower school achievement. Whether or not regular heavy viewing can be shown to have a distinct and independent statistical effect on achievement, it probably helps to cement that syndrome; at the least, it clearly does nothing to ameliorate a variety of social, familial, and academic problems.

WHAT CAN SCHOOLS DO?

Schools cannot ignore the fact that students spend many thousands of hours a year watching television—over half of their leisure time and cumulatively more time than in the classroom itself. That time is spent immersed in stories filled with violence and distorted images of gender, class, and race, produced for commercial purposes by a few large corporations that increasingly dominate culture. These images—and the system that produces them—become accepted as natural and taken for granted.

Schools need not to ignore television, but rather to make it an ever greater part of the curriculum. Schools need to teach students how to read television,[23] to raise critical awareness of specific messages and lessons, to help students to observe television as they watch it. More importantly, schools need to promote understanding of how the economic system of television works, how the commercial interests that control it have come to permeate the culture, and how other voices and interests are shut out.

In this regard, recent developments such as corporate-run "public" schools and Whittle Communication's "Channel One"—a service that provides news programs to classrooms, packaged between commercials—are especially disheartening. Although as yet little empirical evidence about the effects of Channel One is available, it seems inevitable that it will further entrench and legitimize the power of massive private commercial interests in public arenas where a diversity of voices is most essential.

CONCLUSION

Some have claimed that television has created a brighter, more aware generation with greater knowledge of other cultures and world events. It has been argued that television provides a "window on the world" that can stimulate reading, enhance vocabulary, and expand general knowledge.

More vocal are those who believe that television is harmful to learning and academic achievement. Currently, however, scant evidence from the maze of research findings suggests that television in fact impairs the performance of most students. But television plays a massive cultural role that affects all social institutions, including education. Television needs to be seen as a unique and valuable resource greatly in need of democratization, and schools need to confront its decisive and powerful contribution to the commercialization and homogenization of culture and to the narrowing of public discourse.

We will surely hear more about the decline in school performance and the low achievement of students in the United States relative to other countries, and politicians will continue to point a finger of blame at television. It is, of course, far easier to blame television than to reverse years of drastic cuts in school budgets, overcrowded classrooms, underpaid and demoralized teachers, problems with drugs, alcohol, and violence, and general economic despair. But in dealing with these deeper and more intractable problems, we should not lose sight of the fact that television challenges the process of education in ways that go well beyond any effect it may have on how individual students learn and perform in school.

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Alcohol and Cigarette Advertising: A Legal Primer

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The First Amendment casts a shadow over regulation of the advertising of cigarettes and alcohol. Time and time again, advocates for the affected industries and the American Civil Liberties Union, among others, have told congressional committees that the First Amendment protects such advertising from extensive regulation. The Philip Morris Tobacco Company purchased the exclusive right from the National Archives to be the official corporate sponsor of the Bicentennial celebration of the Bill of Rights and participated in an extensive advertising campaign that associated its name with constitutional freedom.[1]

Despite the congressional advocacy and the advertising slogans, the First Amendment affords relatively *little* protection for cigarette and alcohol advertising. Understanding why requires an understanding of the architecture of First Amendment doctrine and the place of commercial speech in the First Amendment structure. With this background, it becomes possible to evaluate the constitutional status of tobacco and alcohol advertising. If the constitutional road to regulation presents fewer obstacles than is conventionally appreciated, it becomes appropriate to look at the existing system of regulation. My contention is that the system is far less powerful than it should be and that the reason is not a failure of the Constitution, but a failure of political will and the American system of political finance.

COMMERCIAL SPEECH AND THE FIRST AMENDMENT

Despite the sweeping language of the First Amendment ("Congress shall make no law . . . abridging the freedom of speech"),[2] much speech is

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regulated by government without constitutional difficulty, e.g., certain forms of defamation, obscenity, perjury, and advocacy of illegal action. These forms of speech are often said to receive no protection under the First Amendment, and for the most part that characterization is accurate. At the other end of the spectrum is speech that is usually characterized as fully protected under the First Amendment. That characterization is also accurate for the most part, although even "fully protected" speech would lose protection if a strong enough argument could be made in a particular circumstance.

For most of the history of the American republic, commercial speech has been subject to regulation with no constitutional difficulty. It was thought to be a kind of speech that was outside the concern of the First Amendment. Today, however, it occupies a midpoint in the spectrum of free-speech protection. It is not as fully protected as political speech, but it no longer occupies the bottom rung beneath the First Amendment's concern. It is a form of protected speech that is less protected than other forms.

The seminal case is *Virginia State Board of Pharmacy v. Virginia Citizen Consumer Council*,[3] which was decided in 1976. For the first time, the Supreme Court held that commercial speech was afforded a degree of constitutional protection. The ruling invalidated a Virginia statute that made advertising the prices of prescription drugs a form of unprofessional conduct, subjecting pharmacists to disciplinary proceedings. In striking down the Virginia statute, the Court spoke in broad terms about the importance of commercial speech: "[T]he consumer's interest in the free flow of commercial information . . . may be as keen, if not keener by far, than his interest in the day's most urgent political debate."[4] It spoke of society's "strong interest in the free flow of commercial information"[5] and argued that "the proper allocation of resources in a free enterprise system"[6] depended on freedom of commercial speech. Such freedom was held to be "indispensable to the formation of intelligent opinions as to how that system should be regulated or altered."[7]

Beyond the importance of commercial speech, the Court spoke of the difficulties that would be involved in distinguishing commercial speech from political speech.[8] Finally, it argued that people know how to make their own decisions and that the First Amendment is at war with paternalism.[9]

Opponents of advertising regulation point to these general sentiments in making their case. If the case law stopped there, the opponents would be on strong ground. But there is more.

In *Virginia Pharmacy*, the Court dropped a telling footnote. The footnote pointed to "commonsense differences"[10] between commercial speech and other types of speech—differences that purportedly justified quite different treatment of commercial speech. For example, the Federal Trade Commission is permitted to secure injunctions against false and misleading commercial speech in circumstances that would be deemed a gross violation of the First Amendment if the speech were political in character. (Imagine a Federal Political Commission securing injunctions against political speech that it deemed to be misleading.) The Federal Trade Commission exists precisely because the market is deemed to afford insufficient protection to the consumer. The same is true of the extensive regulation by the Securities and Exchange Commission of the advertising of stocks and bonds. One person's paternalism is another person's consumer protection.

Although the Court initially tried to claim that the differential treatment of commercial speech had nothing to do with its value, it has since recognized that commercial speech occupies a "subordinate position in the scale of First Amendment values" and has developed a test for evaluating the constitutionality of government

regulation that is far less demanding than the test applicable to noncommercial speech. In brief, commercial speech is protected only if it concerns lawful activity and is not false or misleading. The government may ban truthful speech that concerns lawful activity if the ban directly promotes a substantial state interest by means that are reasonably related to that interest.[11]

Opponents of the regulation of advertising argue that proposed regulations of tobacco and alcohol advertising cannot meet the test for commercial speech. Two main cases refute their argument. The first is *Posadas De Puerto Rico Associates v. Tourism Co.*,[12] in which a gambling casino in Puerto Rico objected to legislation that prohibited gambling casinos from advertising to Puerto Rican residents. The Court squarely held that Puerto Rico had a substantial interest in discouraging its residents from engaging in excessive casino gambling, that an advertising ban directly advanced that interest, that the ban was no broader than necessary, and that these considerations were substantial enough to overcome any First Amendment concerns.

The Puerto Rican scheme was an odd patchwork. Puerto Rico permitted advertising of other forms of gambling to its residents, including horse racing, cockfighting, and the lottery. The scheme also permitted the casinos to advertise to nonresidents. Thus, casinos could advertise in the *New York Times* but not in the *San Juan Star*. Nonetheless, despite the patchwork character of the Puerto Rican program, and even without legislative findings, the Court exhibited substantial deference to the Puerto Rican legislative scheme and upheld it.

If the Court would accept Puerto Rico's determination to ban advertising for casino gambling in the context of a patchwork scheme without legislative findings,[13] clearly the Court would cast a generous eye on the regulation of tobacco and alcohol advertising. Indeed, the Court explicitly mentioned the advertising of such products in the *Posados* opinion:

> It would . . . be a strange constitutional doctrine which would concede to the legislature the authority to totally ban a product or activity, but deny to the legislature the authority to forbid the stimulation of demand for the product or activity through advertising on behalf of those who would profit from such increased demand. *Legislative regulation of products or activities deemed harmful, such as cigarettes, alcoholic beverages* [emphasis added], and prostitution, has varied from outright prohibition on the one hand . . . to legalization of the product or activity with restrictions on stimulation of its demand on the other . . . . To rule out the latter, intermediate kind of response would require more than we find in the First Amendment.[14]

Posadas thus made it clear: a ban on the advertising of cigarettes or alcohol would be constitutional.[15]

The reasoning of *Posadas* left something to be desired, however. If the advertising of gambling, cigarettes, and alcohol could be outlawed because the general product or activity could be outlawed, how could *Posadas* be reconciled with *Virginia Pharmacy*? That is, if drugs could be outlawed, by the same reasoning, did it now follow that drug-price advertising could be outlawed? On the other hand, on a more narrow reading, *Posadas* simply stood for the commonsense view that the regulation of harmful products directly advanced a substantial state interest by reasonable means. In any event, *Posadas* has been a major thorn in the side of industry advocates.

Advocates for the tobacco, alcohol, and advertising industries did not give up, however. At various times, they have argued that cases subsequent to *Posadas* undermined its authority. The cases to which they have pointed show that commercial

speech is protected in the post-*Posadas* world after all. On the other hand, these cases have nothing to do with the advertising of harmful products. The Court held that Illinois could not interfere with an attorney's right to state on his letterhead that he was certified by a nationally prominent body (*Peel v. Attorney Registration and Disciplinary Commission*;[16] that Florida could not prevent a certified public accountant from soliciting new commercial clients without an invitation from them to do so (*Edenfield v. Fane*);[17] and that Cincinnati could not categorically ban commercial newsracks from its sidewalks in circumstances in which the harm from noncommercial newsracks was equally great (*City of Cincinnati v. Discovery Network, Inc.*).[18]

Nothing in these decisions relates to cigarette or alcohol advertising or anything close to it. To vote, for example, to uphold Peel's right to tell the truth about his certification is a far cry from interfering with reasonable efforts to discourage demand for products with a long history of tragic abuse and severe consequences for the nation's health and safety, not to mention its economy.[19] Moreover, taken together, the cases reaffirmed the principle that *nonmisleading* commercial speech for a *legal* product could be outlawed if the government directly advances a substantial state interest by means reasonably tailored to serve that interest.[20]

Posadas was not questioned in the subsequent opinions. More to the point, in a recent Supreme Court case, the principle that cigarette and alcohol advertising is subject to stringent regulation was strongly reaffirmed. The case, *United States v. Edge Broadcasting*, dealt with a federal law that prohibits the broadcast of lottery advertising if the broadcaster is licensed to a state that does not permit lotteries. Edge Broadcasting is licensed to North Carolina, a state that does not permit lotteries. But Edge's station is located about three miles from the Virginia border, and 92.2% of its listening audience is located in Virginia. Edge wanted to carry advertisements for the Virginia state-sponsored lottery, maintained that it had lost substantial revenue because of its inability to do so, and challenged the federal prohibition on First Amendment grounds. The Court upheld the federal prohibition and, in the process, made it clear that the advertising of harmful products can be banned without violation of the First Amendment:

> Within the bounds of the general protection provided by the Constitution to commercial speech, we allow room for legislative judgments. Here, as in *Posadas de Puerto Rico*, the Government obviously legislated on the premise that the advertising of gambling serves to increase the demand for the advertised product. Congress clearly was entitled to determine that broadcast of promotional advertising of lotteries undermines North Carolina's policy against gambling, even if the North Carolina audience is not wholly unaware of the lottery's existence. Congress has, for example, altogether banned the broadcast advertising of cigarettes, even though it could hardly have believed that this regulation would keep the public wholly ignorant of the availability of cigarettes.[21]

The message of *Edge Broadcasting* is the same as that of *Posadas*: the regulation of harmful products such as cigarettes and alcohol is solidly within the government's power.

EXISTING U.S. LAW

Government has exercised its power, however, in limited ways. The advertising of tobacco products and alcoholic beverages is subject to an ad hoc patchwork of regulation that does not lend itself to any coherent explanation. Not only is the system for the regulation of tobacco products substantially different from that affecting alcoholic beverages; the different systems themselves are internally chaotic.

Cigarette Advertising

The scheme concerning tobacco advertising is generally permissive. Although the advertising of cigarettes is prohibited in much of the western world, tobacco advertising is for the most part permitted in the United States. The principal exception is Congress's ban on the advertising of cigarettes and little cigars on radio and television,[22] but advertising of cigarettes in the print media is not prohibited under federal or state law.

Print advertisements are subject to well-known requirements[23] of labeling and warnings from the Surgeon General (concerning lung cancer, heart disease, emphysema, various pregnancy complications, the presence of carbon monoxide, and the advantages of quitting smoking for health). The warnings must appear in a conspicuous way on cigarette packages and in advertising.[24] The Federal Trade Commission regulates the manner in which the warnings are rotated and is supposed to bring enforcement proceedings if violations occur.[25]

State regulation of cigarette advertising to a large extent has been foreclosed by federal law. Congressional legislation expressly prohibits the states and localities from imposing "any requirement or prohibition based on smoking and health . . . with respect to the advertising or promotion of any advertising or promotion of cigarettes" that meets federal labeling requirements.[26] This broad preemption leaves some space for regulation. It does not seem to preclude requirements or prohibitions based on reasons other than smoking and health. It may be permissible, for example, to preclude advertising directed at children or likely to reach a primary audience of children. The transportation systems in the cities of Boston, Denver, Portland, New York, Seattle, San Francisco, and the state of Utah have eliminated tobacco advertising. Proponents of these measures argued that school children were a major part of the population reached by such advertisements and that they needed to be protected from such advertisements.[27] In addition, the preemption may not prevent charges for access to public facilities. For example, New York City requires one antitobacco advertisement for every four tobacco advertisements on city property with respect to all contracts initiated after the passage of the ordinance.[28] If New York negotiates payment of the antitobacco ads by extracting higher fees from the tobacco companies, it can maintain that it has not imposed a requirement (such as additional warnings) or a prohibition. It merely has looked to its contracts with tobacco companies as a source of revenue for antitobacco advertisements.[29]

Finally, the prohibition has been interpreted as not precluding claims of fraud or breach of contract or warranty, i.e., failure to deliver a product that complies with the promises made in the advertising.[30]

Despite these exceptions, the federal preemption/prohibition represents a sweeping ban on the ability of the states to prevent cigarette advertising. Moreover, the existing federal regulations have been evaded or circumvented to some extent. For example, many major league baseball stadiums have billboards that advertise cigarettes. In many circumstances, the billboards are situated in the most televised camera angle.[31] Does this practice constitute advertising on television within the meaning of the congressional statute? Similarly, for a substantial period of time cigarette companies paid for actors to use their cigarettes in movies. Philip Morris, for example, paid $350,000 for James Bond to feature Lark cigarettes in *License to Kill*.[32] The industry agreed to stop making product placements after the Federal Trade Commission launched an investigation to determine whether the placements violated the statute requiring the Surgeon General's warnings to appear on advertisements and whether the showing of the movies on television constituted an additional

violation.[33] Stadium billboards carry the warnings, but there is considerable question whether the warnings appear on television at all, given the particular camera angles, let alone in a conspicuous way.[34]

Finally, the effectiveness of the warnings has been much debated. When 90% of 6-year-olds know that Joe Camel is hawking cigarettes (Mickey Mouse's recognition factor is no better, and Joe Camel does not appear on television), but a majority cannot associate the Surgeon General's warnings with smoking,[35] there is reason to suspect that the attraction of the advertisements outstrips the negative associations.[36] This does not mean that warnings are without important impact; it suggests that warnings alone are insufficient to communicate the health hazards associated with smoking.[37]

Among the most promising approaches to the problem are antismoking messages funded by the government from a substantial increase in sales taxes. Massachusetts has increased excise taxes by 25¢ per pack, and the money raised by the tax will be used to educate children about the disadvantages of tobacco. California, which passed similar legislation, saw a 17% decline in cigarette smoking.[38] Such state legislation has passed despite enormous opposition from the tobacco industry. It is not clear that many states have the political will to withstand that opposition.

Alcohol Advertising

The scheme for regulating alcohol advertising is substantially different from the scheme that applies to tobacco advertising. Federal law, for example, does not prohibit the advertising of alcoholic beverages in any medium, including television.[39] Although alcohol advertising is permitted under federal law, it is subject to a set of federal regulations that forbid deception of the consumer, disparagement of a competitor's products, and obscene or indecent statements.[40] Unlike tobacco advertising, however, proposed legislation that would require the Surgeon General's warnings concerning alcohol to appear in advertising has been consistently defeated in Congress.[41]

It is a mistake, however, to conclude from the relatively lenient treatment afforded to alcohol advertising at the federal level that alcohol advertising emerges relatively unscathed in the American system. Although the federal government has preempted much of what the states might do regarding tobacco advertising, it has preempted relatively little of their authority with respect to alcohol advertising. As a consequence, the alcoholic beverage industry is subject to the laws of the fifty states, which vary substantially from states with a history of animosity to alcohol to states in which politicians are beholden to the interests of alcohol producers.

One of the most significant cases in the area emerged from the scheme of regulation in Oklahoma. Since 1959 it has been lawful to sell and consume alcohol in Oklahoma. But Oklahoma's Constitution (and an implementing statute) prohibit the advertising of alcoholic beverages with the exception of on-site retail signs meeting particular requirements.[42] Despite the sweeping language of the prohibition, additional exceptions have been made. The attorney general, citing enforcement reasons, interpreted the ban as not applying to advertisements in publications printed outside of Oklahoma. The ban was interpreted as applying to broadcast television (over the air) and to cable television (through wires). In practice, however, this aspect of the ban applied only to wine advertisements because hard liquor is not advertised on television and because beer of 3.2% alcohol or less by weight is not included within the statutory definition of alcoholic beverage.[43]

The Supreme Court ruled in *Capital Cities Cable, Inc. v. Crisp*[44] that the cable aspect of the Oklahoma scheme was preempted by federal law. Although a local

broadcasting station can fill in a different commercial for a wine commercial if it wishes to do so or is required to do so by state law, cablecasters are not only forbidden by federal law to change aspects of the programming, but frequently do not have the advance notice or the capacity to make such changes.[45] The Court found that Oklahoma's interference with the federal scheme for the regulation of cable broadcasting would threaten the national goal of ensuring "increased and diversified programming . . . for the maximum number of viewers."[46]

When the dust clears, Oklahoma in practice permits the advertising of beer in all media, the advertising of all alcoholic beverages in the print media (so long as the publications are printed outside the state), and the advertising of all alcoholic beverages on cable television.

In many states, an administrative agency is given the power to regulate the labeling and advertising of alcoholic beverages. The variety of administrative regulations is too extensive to describe in this chapter. It is certainly common to prohibit deceptive or misleading advertising. But the character of the regulation often ranges far beyond. Some flavor of the activity is reflected by a regulation in New York state that governs the types of advertising signs permitted in stores that sell liquor. Among other provisions, signs shall not contain:

> (iii) any statement, design, device, matter or representation which is obscene or indecent or which is obnoxious or offensive to the commonly and generally accepted standard of fitness and good taste; . . . (vii) any statement, design or device which represents or which tends to create or give the impression that the use of alcoholic beverages has curative or therapeutic effects; . . . (ix) any illustration which not dignified, modest and in good taste; . . . (x) any scene in which is portrayed a child or objects (such as toys) suggestive of the presence of a child or in any manner portrays the likeness of a child or contains the use of figures or symbols which are traditionally associated with children . . . (xii) any portrayal of an athlete or athletes or athletic events in such manner as to imply that the consumption of alcoholic beverages improves athletic prowess or physical stamina, or any portrayal or suggestion that athletes recommend drinking alcoholic beverages; . . . (xiii) the name of or depiction of any biblical characters; . . .[47]

Variations on these themes appear in state administrative codes. Minnesota forbids advertisements depicting any person in provocative dress.[48] Ohio forbids any reference to a military subject.[49] Utah urges the alcoholic beverage industry to "avoid any description of a situation that leads the reader or viewer to believe that the enjoyment of that situation is dependent upon the consumption of alcoholic beverages."[50] Specifically outlawed is any advertisement that is particularly appealing to minors.[51] Like New York, Utah does not permit childhood figures or characters to appear in such advertisements.[52] It specifically forbids the appearance of Santa Claus or the Easter Bunny.[53] Utah, however, does not refer to biblical characters in its code. On the other hand, Pennsylvania forbids any statement or representation "referring to religious holidays"[54] but permits "[r]eferences to the Christmas holiday season . . . where such references do not include strictly religious themes" (except, for example, illustrations relating to the traditional use of wine.)[55] Thus, Jesus Christ can appear in Utah's advertisements, but not in New York's and not in Pennsylvania's unless tailored to a particular exception. Santa Claus can appear in Pennsylvania, but not in New York (because he is a character associated with children) and not in Utah. Christ, Santa Claus, and the Easter Bunny can appear in advertisements in Texas unless their appearance is false, misleading, obscene, or indecent.[56] Suffice it to say, therefore, that the regulations vary from state to state.

In addition, to the prohibition of certain kinds of advertising, warnings are sometimes required. California requires that warnings about the dangers of alcohol

be posted in places that sell it for consumption on or off the premises: "Warning: Drinking Distilled Spirits, Beer, Coolers, Wine and other Alcoholic Beverages May Increase Cancer Risk, and During Pregnancy, Can Cause Birth Defects."[57] New York's warning is exclusively concerned with the dangers to pregnant women: "Government Warning: According to the Surgeon General, women should not drink alcoholic beverages during pregnancy because of the risk of birth defects."[58]

But the warnings need not appear in the advertising of alcohol, even though comparable warnings are required in the advertising of cigarettes. Does anything other than politics explain this differential treatment or other important disparities? Why, for example, is it illegal to advertise cigarettes on television, but permissible to advertise alcohol? Why are the Surgeon General's warnings required in cigarette advertising, but not in alcohol advertising?

A recurring industry justification for this phenomenon is that, unlike tobacco, which is an inherently dangerous product, the problem in the consumption of alcohol lies in its abuse. There are several difficulties with this argument. First, for many millions of Americans the use of alcohol *is* abuse, e.g., persons under the age of 21, pregnant women of any age,[59] persons who take prescription drugs that conflict with alcohol, people prone to stomach bleeding, alcoholics, or people prone to become alcoholics. Mass media campaigns that successfully encourage, for example, persons under the age of 21 to drink perform a distinct disservice to the national interest.

Even if the consumption of alcohol were not itself an abuse for many millions, the promotion of alcoholic beverages without warnings encourages increased use, which predictably increases abuse. No substantial public interest in further promotion of the use of alcohol outweighs the problems associated with its predictable abuses. Moreover, to the extent that the consumption of alcohol is not abuse, its promotion with exciting music, sexism,and concocted scenarios of joy is hardly the way to make a decision about whether to drink alcohol as, for example, a way of lowering blood cholesterol. A doctor should give that advice, not an advertiser. Presumably, exercise, the cessation of smoking, and the adoption of a low fat diet are safer recommendations for the mass public to reduce the risks of heart disease. Any notion that people should start drinking now to help their heart, without medical advice, is indefensible.

POLITICAL WILL AND POLITICAL STRUCTURE

The Constitution presents no serious barrier to substantial regulation of tobacco and alcohol advertising. Yet regulation of such advertising, albeit sometimes detailed, is generally permissive. Why?

Perhaps it is the quality of the industry's ideas. To be sure, ideas matter—to some extent. When industry advocates speak out against censorship and paternalism and in favor of the free flow of information in a free enterprise system, they touch chords that resonate powerfully in the American system.

But there are counter chords. The First Amendment protects the dissenters who challenge existing customs, habits, and institutions. It protects the citizen-critic participating in a democracy. But commercial speech has always been a distant relative in the constitutional family. For most of American history, speech hawking products has been afforded *no* First Amendment protection; it has never received generous First Amendment protection. Advertisements that lead children to a lifetime of addiction, resulting in needless death and suffering, are rightly considered to be of low value in the hierarchy of First Amendment speech.

The relatively free reign of tobacco and alcohol advertising is not a case of the truth of good government in the marketplace. It is a textbook case of raw power in

a distorted political marketplace. An example is the political contexts in which the Federal Cigarette Labelling and Advertising Act of 1965 and the so-called Public Health Cigarette Smoking Act of 1969 were passed.[60]

In 1964, the Federal Trade Commission announced its intention to impose a rule that would require cigarette companies to display warnings in all advertising and on containers of cigarettes. The tobacco companies went to Congress for relief. Congress responded by requiring warnings on containers but refused to impose a requirement of warnings on advertising. Indeed, Congress's legislation, the Federal Cigarette Labelling and Advertising Act, specifically prohibited any other governmental agency from imposing warning requirements on cigarette advertising. Thus the Federal Trade Commission was stripped of its authority, and the states were blocked from imposing any warning requirements.

The law, however, provided that its preemption regarding advertising would expire on July 1, 1969. As that date approached, the Federal Trade Commission announced its intention to reinstitute proceedings considering the desirability of warnings in advertising. Moreover, the Federal Communications Commission had declared that the advertising of cigarettes on television without a response violated the Communications Act of 1934, and anticigarette commercials began to appear on television. For every 4.4 smoking advertisements, there was 1 antismoking advertisement. Despite the favorable ratio for cigarettes, both total and per capita consumption of cigarettes declined substantially.

The cigarette companies faced a dilemma. They could not individually go off the airwaves. A single company could continue advertising and increase its market share, even though the triggering of the counter ads would further decrease consumption. The companies could not collectively leave the air without risking an antitrust violation. So the companies lobbied Congress and asked its help to get cigarette advertising off radio and television!

Congress complied.[61] Indeed, in the Public Health Cigarette Smoking Act of 1969 Congress also strengthened the preemption provision as applied to the states. It not only prevented the states from requiring warnings in advertising, but also prevented them from trying to promote public health by regulating or banning cigarette advertising. This, too, was not coincidental. State authorities at that time were moving against cigarette advertising. For example, the California State Senate had passed a bill that would have banned print and electronic advertisements. Although the California Assembly was unprepared to move, the handwriting was on the wall. The tobacco industry desperately needed help from Congress, and Congress delivered.

To be sure, the bill did not give the tobacco industry everything it may have wished for. Warnings were strengthened somewhat on cigarette packages. The bill did not prevent the Federal Trade Commission from moving to require warnings to appear in cigarette advertising, although Congress delayed that action as well.[62] Finally, the tobacco companies undoubtedly would have preferred to keep their ads on television and the counter ads off. But they got the best they could reasonably hope for in a complicated political context: a tobacco protection bill was passed in the name of public health.

The political problem has little to do with the First Amendment or the inability of public health advocates to fashion an appealing case for regulation. When regulation of tobacco or alcohol advertising is proposed, the media, the advertisers, the cigarette or alcohol companies, and their trade associations are prepared to exercise formidable opposition.

The story is not new. Political discourse is filled with commentary about the responsiveness of government to powerful lobbies and its inability to further the

public interest. Progress, of course, is possible, but it is always hard fought and shamelessly incremental. Sometimes setbacks are passed under public health labels.

The products under discussion cause needless death and suffering. They unquestionably represent a serious public health problem. If that problem is to be seriously addressed, however, another public health problem may have to be addressed as well: the health and political economy of the American political system. Those who confront directly the lobbies of harmful products do not waste their time, but thoroughgoing reform may depend also on reforming the system of campaign finance.

Endnotes

*I thank Kathryn Abrams for providing helpful comments on a draft of this article.

1. See Tobacco Issues (Part 2): Hearings Before the Senate Subcommittee on Transportation and Hazardous Materials of the Committee on Energy and Commerce, House of Representatives, 101st Cong., 1–172 (1989–1990).
2. Although the First Amendment, as written, applies only to acts of Congress, it has long been interpreted to apply to the states through the Fourteenth Amendment (forbidding the states to deprive individuals of liberty without due process of law) and to acts of the federal, executive and judicial branches as well.
3. 425 U.S. 748 (1976).
4. Id. at 763.
5. Id. at 764.
6. Id. at 765.
7. Id.
8. Id. at 764–765.
9. Id. at 770.
10. Id. at 777 n.24.
11. *Board of Trustees v. Fox*, 492 U.S. 469 (1989).
12. 478 U.S. 328 (1986).
13. The Puerto Rican legislature made no finding that the casino advertising in fact stimulated demand for the product. "The Puerto Rican Legislature obviously *believed*, when it enacted the advertising restrictions at issue here, that advertising of casino gambling aimed at the residents of Puerto Rico would serve to increase the demand for the product advertised. *We think the legislature's belief is a reasonable one*, and the fact that appellant has chosen to litigate this case all the way to this Court indicates that appellant shares the legislature's view." Id. at 341–342 [emphasis added].
14. Id. at 346–347 [emphasis added].
15. Advocates for the tobacco, alcohol, and advertising industries have struggled mightily to claim otherwise. They have, for example, argued that *Posadas* is just a Puerto Rican case, but the First Amendment applies with full force in Puerto Rico.
16. 496 U.S. 91 (1990).
17. 113 S.Ct. 1792 (1993).
18. 113 S.Ct. 1505 (1993).
19. In addition, there may be an important difference between the informational speech evident in *Peel* (information about certification by a nationally recognized body), *Edenfield* (information about the character of an accountant's services), and *Discovery Network* (information about the availability of real estate properties and about adult educational, recreational, and social programs to individuals in Cincinnati), and the universe of beer commercials, for example, which seems to consist more of catchy tunes, inviting scenarios, and concocted joy than of informational text.
20. See *Edenfield v. Fane*, supra note 17. The regulation must also materially further the substantial state interest. This seems to be a reasonable requirement, but it is not usually recited in the formulation of the commercial speech test.
21. 113 S. Ct. 2696, 2702 (1993).
22. 15 U.S.C. §1335. Advertising of smokeless tobacco in the electronic medium is prohibited by the Comprehensive Smokeless Tobacco Act, 15 U.S.C. §4402 (f).
23. The warning requirements do not apply to the advertising of cigarettes on utilitarian objects such as t-shirts. Warning requirements do apply, however, for the advertising of smokeless tobacco on utilitarian objects. By contrast, cigarette advertising on billboards must carry warnings [15 U.S.C. §1333 (3)]; smokeless tobacco advertisements on billboards need not [15 U.S.C. §4402 (2)].

24. 15 U.S.C. §1333.
25. Id.
26. 15 U.S.C. §1334. The preemption provision for smokeless tobacco, as worded, does not address the question of whether a state could ban the advertising of smokeless tobacco.
27. New York City Transit Authority bans tobacco advertising. 4 Tobacco Free Youth Reporter 21 (Fall 1992).
28. For general discussion of the law, see *Vango Media v. City of New York*, 1993 WL 190292 (S.D.N.Y. 1993).
29. But cf. *id.* (invalidating the law as applied to licensed taxicabs without reaching the question of the law's validity as applied to public property). California has imposed a 25% cigarette tax to finance a highly successful antismoking campaign. See source cited in note 38 infra.
30. *Cipollone v. Liggett Group*, 112 S.Ct. 2608 (1992). The smokeless tobacco act expressly provides that common law and state statutory law actions are not foreclosed by the act (unless they otherwise violate the preemption, which prevents the states from requiring any warnings or statements other than those required by the act except for billboards, which are not covered). 15 U.S.C. §4406.
31. Parks commissioner silent on stadium billboards. Smoke Free Air 2 (Spring 1993). To the extent the stadium is privately owned, the preemption does not apply because a private owner is not a state or a locality. The placement of tobacco advertisements on billboards in the majority of major league parks seems to violate the prohibition against advertising on television, particularly because they are often situated in the most televised camera angle. Id.
32. Rothenberg R: The media business: Critics seek FTC action on products as movie stars. New York Times, May 31, 1991, at D1, col. 1.
33. Id.
34. Nonetheless, the Justice Department has been unwilling to take action. By contrast, smokeless tobacco companies settled a suit brought by the Federal Trade Commission, agreeing that they would no longer sponsor events that would cause their logos to appear on television. Tobacco-free sports pick up momentum. Smoke Free Air 4 (Fall 1992). Other methods of circumventing the congressional ban have been even more clever, e.g., the ads that put Philip Morris' logo on the air to associate the company with freedom and the Bill of Rights. For an account of indirect methods of evading the French ban on tobacco advertising, see Gilbey RJ: Anti-tobacco laws in France. 46 Trademark World 25–29 (April 1992).
35. Key findings of JAMA "record" articles concerning Camel Joe campaign. 4 Tobacco Free Youth Reporter 5 (Fall 1992).
36. For the contention that warnings are ineffective, see Schuster C, Powell CP: Comparison of cigarette and alcohol controversies. 10 Journal of Advertising 26 (1987).
37. On the deceptive character of much cigarette advertising, see Trade regulation rule for the prevention of unfair or deceptive advertising or labeling of cigarettes in relation to the health hazards of smoking. 29 Fed. Reg. 8325 (July 2, 1964). Australia requires that strong warnings cover a quarter of the front of cigarette packages and the entire back of the package. The back of the package includes a quit line number. See Australia to require large cigarette package warning levels. 4 Tobacco Free Youth Reporter 21 (Fall 1992).
38. Massachusetts wins big excise tax battle. Smoke Free Air 3 (Winter 1992–93).
39. So-called hard liquor does not advertise in the electronic media. This may be an instance of industry self-regulation to avoid congressional action.
40. The Federal Trade Commission and the Bureau of Alcohol, Tobacco, and Firearms have overlapping jurisdiction with respect to many of these matters. Compare 15 U.S.C. §52 (FTC authority) and 27 U.S.C. §205 (BATF authority), but the detailed regulations of the BATF are more significant. See, e.g., 27 C.F.R. ch 1 §§ 4.60–4.65 (regulating the advertising of wine); §§5.61–5.66 (regulating the advertising of distilled spirits); §§ 7.50–7.55 (regulating the advertising of malt beverages).
41. On the other hand, federal law requires a government warning to appear on the container of alcoholic beverages: "GOVERNMENT WARNING: (1) According to the Surgeon General, women should not drink alcoholic beverages during pregnancy because of the risk of birth defects. (2) Consumption of alcoholic beverages impairs your ability to drive a car or operate machinery, and may cause health problems." 27 U.S.C. §215. In practice, the warnings are usually not even noticed by consumers given their placement and type, and the states are preempted from requiring any other statements to appear on alcoholic beverage containers. 27 U.S.C. §216.
42. See Okalahoma Const. art. XXVII, §5; Okla. Stat., tit. 37, §516.
43. Okla. Stat. tit. 37, §506(2).
44. 467 U.S. 691 (1984).
45. See generally id.
46. Id. at 714.
47. N.Y. Alco. Bev. Contr. S.L.A. App. §83.3

48. Minn. R. §7515.0760.
49. Ohio Admin. Code §4301:1-1-44.
50. Utah Admin. Code R 81-1-7.
51. Id.
52. Id.
53. Id.
54. 40 Pa. Code §13.23.
55. Id.
56. Tex. Admin. Code tit. xvi, §45.28.
57. Cal. Admin. Code tit. xxvi, §22-12601.
58. N.Y. Alco. Bev. Contr. §105-b.
59. I rely here on the Surgeon General. I am told that other doctors would not go as far.
60. For the background of these acts, see generally *Cipollone v. Liggett Group*, 112 S.Ct. 2608 (1992); *Capital Broadcasting v. Mitchell*, 333 F. Supp. 582 (D.C.D.C.1982).
61. The formal request by the tobacco companies was an antitrust exemption permitting them to collectively withdraw their ads. See *Capital Broadcasting Co. v. Mitchell*, 333 F. Supp. 582 (D.C.D.C. 1971) (Wright J, dissenting). But the law saved the transaction costs, and the tobacco industry did not challenge the law in court. On the other hand, the FCC later changed its mind and ruled that fairness doctrine did not apply to product advertising. In the new FCC regime, the tobacco ads would have appeared without counter ads.
62. The FTC imposed a requirement in 1972. See *In re Lorillard*, 80 F.T.C. 455 (1972).

Killing Us Softly: Gender Roles in Advertising

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ROLE OF ADVERTISING IN CONTEMPORARY CULTURE

Advertising campaigns no longer simply interrupt the news; in recent years, they have become the news. Community groups successfully halted the marketing of Uptown, a new cigarette that targeted inner-city African-Americans. People were and still are outraged by a cartoon camel called "Old Joe," who successfully sells Camel cigarettes to children. The Surgeon General and other public health activists called for restrictions on alcohol and cigarette advertising. The Swedish Bikini Team, featured in beer commercials, was also featured in a sexual harassment suit brought by female workers in the beer company.

More and more people are taking advertising seriously. They realize that the $130 billion advertising industry is a powerful educational force in the United States. The average American is exposed to over 1,500 ads a day and will spend 1½ years of his or her life watching television commercials. The ads sell a great deal more than products. They sell values—images and concepts of success and worth, love and sexuality, popularity and normalcy. They tell us who we are and who we should be. Although individual ads are often stupid and trivial, their cumulative impact is serious.[7,18,30]

Advertising is the foundation and economic lifeblood of the mass media. The primary purpose of the mass media is to sell audiences to advertisers; the primary purpose of television programs is to deliver an audience for the commercials. Advertising is partially a reflection of the culture that created it. Because of its power, however, it does a great deal more than simply reflect cultural attitudes and values; it plays an important role in shaping them.

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Far from a passive mirror of society, it is an effective medium of influence and persuasion, both a creator and perpetuator of the dominant attitudes, values, and ideology of the culture, the social norms, and the myths by which most people govern their behavior. Advertising performs much the same function in industrial society as myth performed in ancient and primitive societies—and with a similarly conservative effect.[19]

Advertising affects almost all of us throughout our lives. Adolescents are particularly vulnerable, however, because they are new and inexperienced consumers—and the prime targets of many advertisements. They are in the process of learning values and roles and developing self-concepts. Most teenagers are sensitive to peer pressure and find it difficult to resist or even to question the dominant cultural messages perpetuated and reinforced by the media. Mass communication has made possible a kind of national peer pressure that erodes private and individual values and standards as well as community values and standards. Margaret Mead once said that the children of today are brought up by the mass media rather than by parents.[21]

Advertisers are aware of their role and do not hesitate to take advantage of the insecurities and anxieties of young people, usually in the guise of offering solutions: a cigarette provides a symbol of independence; designer jeans or sneakers convey status; the right perfume or beer resolves doubts about femininity or masculinity. Because so many anxieties center on sexuality and intimacy and because advertising so often offers products as the answers, gender roles may be the most deeply affected cultural concept.

STEREOTYPES

What do teenagers learn about gender roles from advertising? On the most obvious level, they learn the stereotypes that have existed for a long time and certainly have not been created or perpetuated solely by advertising. From birth we receive messages about sexism and gender stereotypes from every aspect of society. No messenger is more pervasive or persuasive, however, than advertising.

The stereotypes in television commercials have changed very little. Advertising creates a mythic, white, middle-class world in which people are rarely ugly, overweight, poor, elderly, struggling, or disabled, either physically or mentally (unless one counts the housewives who talk to little men in toilet bowls).[13] Women are shown almost exclusively as sex objects or as housewives pathologically obsessed with cleanliness. These days, however, they are likely to announce that they also have a career: "I'm a brain surgeon, but right now my trickiest problem is how to get the grease off this stove." Men are generally rugged authority figures, dominant and invulnerable. Men who are married or engaged in "women's work" are often portrayed as idiots and buffoons: "Honey, can you wash these dirty work clothes in cold water?" These stereotypes, and to some extent their effects, have been well documented.[3,6] The stereotyping of children in the media has perhaps never been worse. Television programs for children are filled with active boys and passive girls and sponsored by action products for boys and beauty products and dolls for girls.

Young people are also affected by advertising in more subtle, indirect ways that are perhaps more powerful than stereotypes (which increasingly are recognized and sometimes ridiculed). Advertising could be considered the propaganda of American society. It teaches us to be consumers, to value material possessions above all else, to feel that happiness can be bought, to believe in instant solution to complex problems, and to turn to products for fulfillment of our deepest human needs. In the world of

advertising, we are encouraged to have relationships with products. "The best relationships are lasting ones," a Toyota ad announces. Although a couple is featured, the ad certainly implies that the lasting relationship will be with the car. As a result, objects are given great importance and value, and people are often reified. This is particularly true for women, who are depicted primarily as sex objects, and increasingly true for men, who are depicted as success objects. In both cases, the person becomes a thing, and his or her value depends on the products used.

TYRANNY OF THE IDEAL IMAGE

The sex object is a mannequin whose only attribute is conventional beauty. She has no lines or wrinkles (which are, after all, signs of maturity, expression, and experience), no scars or blemishes; indeed, she has no pores. This perfection used to be achieved through cosmetics, camera tricks, and airbrushing; today it is achieved primarily through computer retouching, which can completely alter a photograph.

The sex object is thin, generally tall, and long-legged; above all, she is young (Fig. 1). All so-called beautiful women in the mass media, regardless of product or audience, conform to this norm. Women are constantly exhorted to emulate this ideal, to feel ashamed and guilty if they fail, and to equate desirability and the capacity for being loved with physical perfection.

The image is artificial and can be achieved only artificially. As a Bonne Bell cosmetics ad tells us, "Natural beauty is rarely achieved naturally." Desperate to

FIGURE 1. Tanqueray gin.

BEST COPY AVAILABLE

conform to an impossible ideal, many women go to great lengths to manipulate their faces and bodies. Over two million American women have had silicone implanted in their breasts.[11] More than a million dollars are spent on cosmetics every hour in the United States.[5] A woman is conditioned to view her face as a mask and her body as an object, both separate from and more important than her real self, constantly in need of alteration, improvement, and disguise. She is made to feel dissatisfied with and ashamed of herself, whether or not she tries to achieve the ideal. Objectified constantly by others, she learns to objectify herself.

It is difficult not to internalize this objectification. Women are told in many ways throughout their lives that they are not quite right. As Wendy Chapkis said, "We are like foreigners attempting to assimilate into a hostile culture."[4] Women will never be accepted as they are, not even the most stereotypically beautiful (e.g., the uproar when Madonna revealed her unshaven armpits in *Playboy*). The ridicule of fat women, old women, and bag ladies is a reminder that women must be ever vigilant; they are just one razor blade—or one more year or several more pounds—away from contempt.

Women are also supposed to keep their beauty rituals secret and never expose the artifice. Everything must be taken care of in private. Even in the ads, we see only the results, not the process. Men shave their bristly beards, but women shave legs that are already smooth. We never see a woman tweezing her chin. Women in curlers and cold cream are objects of ridicule. The process is supposed to be magical and must never be questioned.

The essence of "feminine beauty" is vigilance and artificiality. Men may be expected to enhance their appearance (at times by appearing unshaven and completely cavalier), but women are supposed to transform themselves. Vanity is encouraged in women but judged harshly in men. In a print ad, headlined "Simply beautiful," a little girl sits at a vanity table, looking into the mirror. An ad headlined "Simply handsome," with a little boy at a mirror, would be viewed as perverse. Women learn early that their natural state is basically ugly and that beauty depends on how well they learn to disguise themselves.

Even worse, beauty is often virtue in American culture. In the media, only the beautiful deserve love and romance, only the beautiful experience sex. Research confirms that the physically "ugly" are often judged as inwardly ugly. People who are considered unattractive or obese are harshly discriminated against from childhood onward.

Most women learn a sense of inferiority and insecurity that leads to hostile competition with other women. Even the rare teenager who approximates the ideal suffers. She may experience stunted development in other areas of life and damaged relationships with other women. A shampoo campaign in the late 1980s featured a series of conventionally beautiful women, each saying, "Don't hate me because I'm beautiful." Constant objectification can lead to callous disregard for others or to fear that a woman's entire value depends on her appearance. The cultural worship of the adolescent female can lead to unrealistic expectations for the future and can contribute to lifelong rage against women by rejected men. The ideal image harms all women, whether or not they approximate it briefly (there is no other way to do so) in their own lives. It makes most genuine women at best invisible, at worst the targets of contempt and hostility.

Although beauty is generally equated with virtue, sometimes beautiful women are seen as inherently dangerous or untrustworthy. In recent films, such as *Fatal Attraction* and *Final Analysis*, the unmarried beautiful woman is ultimately evil or unbalanced. In real life, the beautiful women is also judged especially harshly as she

ages or loses her beauty (e.g., the hostility directed against Elizabeth Taylor whenever she gains weight). The beautiful woman is like a rich person doomed to eventual bankruptcy. Even as the "baby boom" generation reaches midlife, the ideal for women remains fixed at about 25 years of age; thus older women turn to cosmetic surgery and elaborate, time-consuming fitness programs in an attempt to maintain the ideal.

DISMEMBERMENT

Women are dismembered in advertisements, their bodies separated into parts that need change or improvement. If a woman has acceptable breasts, then she must also be sure that her legs are worth watching, her hips slim, her feet sexy, and her panty lines invisible. The mannequin has no depth, no totality. She is an aggregate of parts that have been made acceptable.

Often the woman in a television commercial is a literal aggregate of parts. She seems to be one woman but in reality is four or five—one woman's face, another woman's hands, another woman's legs, another woman's hair. In films, body doubles are increasingly common, not only to protect the star's modesty but also to give the illusion that she has a perfect body.

Women's bodies are not only dismembered but often gratuitously insulted. A recent ad for Dep hair-styling products in many women's and teen magazines had the following copy:

> Your breasts may be too big, too saggy, too pert, too full, too far apart, too close together, too A-cup, too lopsided, too jiggly, too pale, too padded, too pointy, too pendulous, or just two mosquito bites. But with Dep styling products, at least you can have your hair the way you want it. Make the most of what you've got.

At about the same time, a Calvin Klein ad made national news by featuring a nude man in a shower, holding a pair of jeans over his crotch (Fig. 2). Some reporters claimed that men are now treated as sex objects exactly as women are. But the difference becomes obvious when we try to imagine the ad with the following copy:

> Your penis may be too small, too droopy, too limp, too lopsided, too narrow, too fat, too jiggly, too hairy, too pale, too red, too pointy, too blunt, or just two inches. But at least you can have a great pair of jeans. Make the most of what you've got.

Such treatment of men is unthinkable, but it is routine for women and girls. No wonder recent research indicates that the self-esteem of girls plummets as they reach adolescence, whereas the self-esteem of boys remains intact.[2]

BODY LANGUAGE

As Goffman pointed out in his seminal book, *Gender Advertisements*, we learn a great deal about the disparate power of men and women simply through the body language and poses of advertising.[9] Women are generally subservient to men in ads, both in size and position. Women are often shown as playful clowns, perpetuating the attitude that women are childish and cannot be taken seriously (Fig. 3), whereas men are generally portrayed as secure, powerful, and serious.

Goffman also discusses what he calls "canting." People in control of their lives stand upright, alert, and ready to meet the world. In contrast, women often appear off-balance, insecure, and weak. Often their body parts are bent, conveying unpreparedness, submissiveness, and appeasement. Women often cover their faces with their hair or hands, conveying shame or embarrassment.

FIGURE 2. Calvin Klein jeans.

WORSHIP OF YOUTH

"You're a Halston woman from the very beginning," the advertisement proclaims. The model stares provocatively at the viewer, her long blond hair waving around her face, her bare chest partially covered by two curved bottles that give the illusion of breasts and cleavage. The average American is accustomed to blue-eyed blondes seductively touting a variety of products. In this case, however, the blonde is about 5 years old.

Young women are discouraged from growing up and becoming adult. Growing older is the great taboo. The traits considered most feminine are also considered most childlike, e.g., passivity, submission, and dependence. (Of importance, however, is the far greater relevance of this equation to white women than to women of color.) Advertising slogans such as "because innocence is sexier than you think" and "sensual, but not too far from innocence" place women in a double bind. Somehow women are supposed to be both sexy and virginal, experienced and naive, seductive and chaste. Pressure has increased on women of all ages to be sophisticated and accomplished yet feminine, that is, fragile and childlike. The disparagement of maturity is insulting and frustrating to adult women, and the implication that little girls are seductive is dangerous to children.

We have been surrounded for years by images of grown women who act like little girls, often playing with dolls and wearing bows in their hair. Only within the past decade or so, however, has the little girl been presented as a grown woman, the sex object, the ideal (Fig. 4). Today little girls are sexually exploited by everyone from

FIGURE 3. Nair.

Calvin Klein to the multibillion dollar pornography industry. Sexual abuse of children seems to be increasing dramatically (or perhaps it is just more often reported). Recent research indicates that in America 1 in 3 girls and 1 in 5 boys are sexually abused during childhood.[29] Is there a connection?

It would be foolish to suggest that advertising is the cause of sexual abuse of children. The problem is complex, with many causal and contributing factors. Although flagrant sexism and gender stereotyping abound in all forms of the media, it is difficult to document their effects on individuals and institutions, primarily because it is difficult to separate media effects from other aspects of the socialization process. It is also almost impossible to find a comparison group, because almost everyone has been exposed to massive doses of advertising. Research shows, however, that media users, especially children, are directly affected and influenced by media content.[27]

HEALTH EFFECTS OF THE IDEAL IMAGE

Ironically, the heavily advertised products, such as cosmetics, cigarettes, alcohol, and soft drinks, are in fact detrimental to physical attractiveness. The media place little emphasis on good nutrition, exercise, or other important aspects of health and vitality.

FIGURE 4. Very Cherry.

The current emphasis on excessive thinness for women is one of the clearest examples of advertising's power to influence cultural standards and individual behavior. The ideal body type is unattainable by most women, even if they starve themselves (Fig. 5). Only the thinnest 5% of women in a normal weight distribution approximate the ideal; 95% of American women are excluded. Television and the other media thus reflect the visual minority rather than the general population. In fact, the majority of women on television today are much thinner than in previous decades.[10]

As a result, more than half of the adult women in the United States are currently dieting, and over three-fourths of normal-weight American women think that they are "too fat."[25] This mass delusion sells a wide variety of products and supports a $33 billion diet industry.[1] It also causes enormous suffering for women, involving them in false quests for power and control, while deflecting attention and energy from goals that in fact might empower them.

The preoccupation with weight is beginning at increasingly younger ages for women. A 1986 study by Mellin and Irwin showed that nearly 80% of fourth-grade girls in the San Francisco Bay Area were watching their weight.[26] In a study of 3,000 adolescents, Rosen and Gross found that most of the boys were trying to gain weight, whereas at any given time two-thirds of girls aged 13–18 years were trying to lose weight.[24] Boys, of course, are encouraged to be bigger and stronger (to the point of using dangerous steroids), whereas girls are supposed to be thin and fragile.

FIGURE 5. Geoffrey Beene.

Eating disorders have increased dramatically in recent years.[14] Given the research on the biologic, familial, and psychological contributions to eating disorders, it would be simplistic to hold advertising solely accountable for this increase. However, it is certainly a factor. At least one study of female college students suggests that the impact of advertising is indeed substantial. Brief exposure to several ads showing highly attractive models resulted in decreased satisfaction with personal appearance in comparison with the satisfaction of a control group who saw ads without models.[23]

An emphasis on dieting has been accompanied in the media by an increasing emphasis on fitness, which is often misguided and misleading. An obsession with exercise can be as damaging as an obsession with dieting; indeed, women with anorexia often suffer from both obsessions. The current ideal is especially unattainable for women with limited time or money.

Even more insidiously, the fitness craze displaces the concept of power for women, reducing it to narcissism. A fit body may give the illusion of power and change, but an underpaid and undervalued woman who is physically fit is still underpaid and undervalued.

Women's limited sense of power was strikingly revealed in a survey of middle-aged women who were asked what they would most like to change about their lives. One thinks immediately of low salaries, ill health, poverty, or the environment. Over

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half of the women, however, said that they would most like to change their weight.[22] In another survey, 30 girls aged 11–17 years were given three magic wishes. The number-one wish of the majority was "to lose weight and keep it off."[28]

In fact, ads and television programs rarely portray women with the same control as men. In the 1987–1988 television season, only 3 of 22 new prime-time dramas featured female leads, and 66% of the prime-time speaking characters were male.[8] According to a 1993 study by the Screen Actors Guild and the American Federation of Television and Radio Artists, men under the age of 40 years received 43% of the roles in films, whereas women under 40 received 23% and women 40 years of age and older received only 8%. Over 80% of voiceovers in television commercials are male.[12]

American culture still has a tremendous fear of feminine power, as if it would be inherently destructive. Some argue that men's awareness of how powerful women can be has created the attempts to keep women small; hence the pressure on women to be thin, to be like little girls, not to take up too much space, literally or figuratively.[17] At the same time, there is pressure to succeed, to "have it all." In other words, women can be successful as long as they stay "feminine" (i.e., powerless enough not to be truly threatening). An image of fragility demonstrates that a woman is both in control and still very feminine.[16]

EFFECTS ON SEXUAL ATTITUDES

Young people learn a great deal about sexual attitudes from the mass media and from advertising in particular. Advertising's approach to sex is pornographic: it reduces people to objects and deemphasizes genuine human contact and individuality. It often directly targets young people (Fig. 6). This reduction of sexuality to a dirty joke and of people to objects is the true obscenity of American culture. Although the sexual sell, overt and subliminal, is at fever pitch in most advertising, depictions of sex as an important and profound human activity are notably absent. A sense of joy is also notably absent; the models generally look either hostile or bored.

Sex in advertising is narcissistic, autoerotic, and divorced from relationships. Identical models parade alone through the commercials, caressing their own soft skin, stroking and hugging their bodies, shaking their long silky manes, sensually bathing and applying powders and lotions, and then admiring themselves at length in the mirror. Advertising depicts a world of pervasive sexual innuendo but no love; passion is reserved solely for products.

The curious sterility is due mainly to the stereotypes, which reduce variation and individuality, mock the process of self-realization, and make empathy impossible. When the goal is to embody the stereotype (which by definition is shallow and uniform), depth, passion, and uniqueness are inevitably lost. Men lose, of course, as well as women. Although not as directly subjected to the tyranny of the esthetic ideal, men are made to feel inadequate if their women—that is, their property—do not measure up. Women are portrayed as sexually desirable only if they are young, thin, carefully made-up and groomed, depilated, sprayed, and scented—rendered quite unerotic, in fact. Men are conditioned to seek such partners and to feel disappointed if they fail.

Most advertising places a tremendous emphasis on impulsivity, on being overpowered by a product (such as a perfume or pair of jeans). Advertisements rarely contain accurate information about sex or emphasize relationships or intimacy (30 seconds is hardly enough time for the sexual encounter, let alone development of character). Thus advertising probably contributes to the damaging concepts of the

FIGURE 6. Whooz Blooz jeans.

"good girl" who is swept away, unprepared for sex, and the "bad girl," who plans for sex, uses contraception, and is generally responsible. The "sensual but not too far from innocence" phenomenon discussed above undoubtedly contributes to this irrational thinking. A young girl or woman can manage to have sex and yet in some sense maintain her virginity by being out of control or deep in denial of the entire experience.

The main goal of sex in advertising, as in pornography, is power over another, either by the physical dominance or preferred status of men or the perceived exploitative power of female beauty and sexuality. Men conquer, and women ensnare, always with the essential aid of a product. The woman is rewarded for her sexuality by the man's wealth, as in the Cigarette boat ad (Fig. 7), in which the woman asks, clearly after sex, "Does this mean I get a ride in your Cigarette?"

SEXUAL AGGRESSION AND VIOLENCE

Sometimes the dominance of men escalates to sexual violence. Often hostility to women is openly expressed in the ads (Fig. 8), sometimes in the form of outright sexual aggression. This hostility often starts at a very early age.

Advertising does not cause violence. However, as discussed above, it often creates a climate in which certain attitudes and values flourish, such as the attitudes

FIGURE 7. Cigarette boats.

that a woman's physical appearance is her most important and valuable attribute, that aging makes women unattractive and therefore less valuable, and that victims of sexual assault "asked for it." This attitude now applies to females of all ages, as evidenced by the remark of a Wisconsin judge that a 5-year-old rape victim was "an unusually sexually permissive young lady."[15] Although the media do not cause this highly dangerous attitude, they contribute to it with pervasive images of women and girls as passive, decorative, and seductive—and often as enjoying aggression and violence.

The myths of any culture are deep, powerful, and difficult to change. The myth that women love and deserve to be beaten has made it difficult for the millions of women victimized by violence to get help and for the whole issue of domestic violence to be taken seriously. The myth that women ask to be raped and enjoy forcible sex has been perhaps the major factor in encouraging cultural tolerance, if not actual acceptance, of rape. The myth of Lolita, the seductive and manipulative child-woman, undoubtedly contributes to the abuse of children and the readiness of society to blame the victim.

The deeply held belief that all women, regardless of age, are temptresses in disguise, sexually insatiable and seductive, conveniently transfers all blame and responsibility onto women. Recent research indicates that the media reenforce this belief and thus affect people's attitudes and behavior.[20]

FIGURE 8. An Acquired Taste (Adams Boots).

IMAGES OF MEN

Although men are allowed and encouraged to become adults, the acceptable images for men are also limited and rigid. Men are generally conditioned to be obsessed by status and success, as measured in material terms, and to view women as objects to be acquired as further evidence of status. The portrayals of single men and married men are strikingly different in the mass media. Single men are generally independent and powerful, whereas married men are often presented as idiots, as if contaminated by their intimacy with women. This is particularly true of the few male characters who do domestic chores or relate to children. The stereotypes of men have changed very little.

NEW STEREOTYPES

Some changes have occurred in the images of women. Indeed, a "new woman" has emerged in commercials in recent years. She is often presented as a superwoman who manages to do all the work at home and on the job (with the aid of a product, such as Hamburger Helper, but not of her husband, let alone an enlightened national child-care policy) or as the liberated woman who owes her independence and self-esteem to the products she uses. The new images do not represent progress; instead, they create a myth of progress, an illusion that reduces complex sociopolitical

problems to mundane personal dilemmas, thereby trivializing the issues and diverting energy and attention from a search for genuine solutions.

Superwoman is perhaps the most damaging stereotype of all. Many young women now seem to feel that they can effortlessly combine marriage and career. The myth of progress obscures the fact that the overwhelming majority of women are in low-status, low-paying jobs and are as far removed from superwoman's elite executive status as the majority of men from her male counterpart. The definition of success is still entirely male. The successful woman is presented as climbing up the corporate ladder, seeking money and power. The working woman is expected to get ahead in a man's world, adhering strictly to male values but always giving first priority to her role as wife and mother. In addition, the myth of superwoman places total responsibility for change on the individual woman and exempts men from the responsibilities and rewards of domestic life and child care. It also diverts attention from the political policies that would truly change our lives.

Advertising often reduces the political to the personal. We are told that if we use the right products and get our personal acts together, everything will be fine. There is never the slightest hint that people often suffer because of a socioeconomic and political situation that could be changed. If we are unhappy, something is wrong with us, and buying the right product will solve it. We can smoke a cigarette or have a drink or try a new eyeshadow.

The models of adulthood that advertising offers to adolescents are extremely limited and contradictory. Women are supposed to be little girls or superwomen or both. Men are rigidly socialized to repress all feelings of vulnerability, thereby virtually guaranteeing that intimate relationships will be impossible. Motherhood is presented as essential for women and fatherhood as irrelevant for men. Sexuality becomes a commodity.

RESOURCES FOR CHANGE

The greatest tragedy is that many people internalize the limitations of stereotypes, which thus become a self-fulfilling prophecy. If one accepts such mythical and degrading images, to some extent one actualizes them. By remaining unaware of the profound seriousness of the ubiquitous influence, the redundant message, and the subliminal impact of advertisements, we ignore one of the most powerful educational forces in the culture. Advertising greatly affects our self-images as well as our ability to relate to each other and effectively destroys any awareness or action that may help to change the cultural climate.

Far from trivial, such stereotypes and images are global and economic issues. The Western model of beauty has become an international fantasy, spread by advertising, the media, and multinational corporate power. American television programs are shown worldwide. Strategies of global advertising lead to uniformity of desires as well as of images.

Solutions range from writing letters to advertisers and boycotting products to more powerful strategies such as teaching media literacy in all of our schools, beginning in kindergarten. Parents should be educated to control their children's television viewing and to watch television with their children to counter its effects.

We should also encourage the government to restrict certain kinds of advertising, to ban all cigarette advertising (as Canada recently did), and to put health messages on ads for alcohol and diet products. Physicians, including the Surgeon General, could play an important role by stressing such measures as a major public health issue and by encouraging further research.

We must also work to eradicate sexism, to abolish damaging stereotypes of women and men, and to create avenues to real power for all people. In the short term, it helps to protest the images in advertising, but it is unrealistic to expect radical change. Change can take place in the society, however. An essential step in creating that change is understanding and challenging the cultural myths and stereotypes. Above all, as always, we must break the silence.

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